

Receiving Report

Date: 14/12/15

Batch No: M13/049

Supplier: B.E

Dart P/O: 26710

Packing Slip: Yes ☒ No ☐
 Invoice: Yes ☒ No ☐
 Receipt: Cash ☐ Cr ☒
 New Supplier Yes ☐ No ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐
 Waybill Attached: Yes ☒ No ☐ N/A ☐
 Shipment Complete: Yes ☐ No ☒ N/A ☒
 QC18 Inspection ☐ N/A ☒
 Work Order ☐ N/A ☒

Discrepancies

Part Number	Description	Quantity Ordered	Quantity Rec'd	Quantity Short	Quantity Inspected	Quantity Rejected	Comment / NCR Number

Initials of Receiver

QC12

SP

Production/Admin:

Date

Received/Costing

Initial

Location

B/E Aerospace, Inc.

CONSUMABLES MANAGEMENT

Tel: +1.305.925.2600 • Fax: +1.305.507.7191 • www.beconsumables.com

Remit to Address: 88289 Expedite Way, Chicago, IL 60695-0001

Wire Instructions: B/E Aerospace Consumables Management • JPMorgan Chase Bank New York

ABA: 021000021 • Account: 304639273 • SWIFT: CHASUS33 • CHIP UID: 0002

INVOICE NUMBER

HXH56Y

PAGE 1 OF 4

SOLD TO:

002409
DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY, ON
CANADA K6A 1K7

SHIP TO:

DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY, ON
CANADA K6A 1K7

ORDER NO.		DATE	SHIP VIA	TERMS	SHIPPING TERMS		
PO26710		12/04/14	FEDX INTL P1 COLL	NET 45	FOB-MIAMI		
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
1	100	80-004-2-8 INSERT Country Origin: USA TARIFF: 3926.90.8500 MFR: YOUNG ENGINEERS CTRL# : 2014C02552 LOT# : 51966 LOT QTY: 100 COUNTRY OF ORIGIN: USA Country of Origin: USA	3.200	EA	0	100	320.00 ✓
2	800	MS27039-1-04 SCREW ECCN :9A991 Country Origin: USA TARIFF: 7318.15.6080 MFR: MAC FASTENERS CTRL# : 2013C13726 LOT# : 65011 LOT QTY: 800 COUNTRY OF ORIGIN: USA Country of Origin: USA	0.110	EA	0	800	88.00 ✓
3	200	MS27039-1-05 SCREW ECCN :9A991 Country Origin: USA TARIFF: 7318.15.6080 MFR: MAC FASTENERS CTRL# : 2014J08101 LOT# : 70671 LOT QTY: 200 COUNTRY OF ORIGIN: USA	0.080	EA	0	200	16.00 ✓
8014-125							
CONTINUED							
MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY B/E AEROSPACE							

MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY B/E AEROSPACE

ALL ITEMS ARE SUBJECT TO A 100% RESTOCKING CHARGE.

SHIPPED FROM: 10000 NW 15 TERRACE, MIAMI, FL 33172

ORIGINAL INVOICE

BY RECEIVING DELIVERY OF THE ITEMS COVERED BY THIS INVOICE, BUYER AGREES TO THE TERMS AND CONDITIONS OF SALE AT:
http://www.beconsumables.com/cm/conditions_of_sale.cfm



B/E Aerospace, Inc.

CONSUMABLES MANAGEMENT

Tel: +1.305.925.2600 • Fax: +1.305.507.7191 • www.beconsumables.com
Remit to Address: 88289 Expedite Way, Chicago, IL 60695-0001
Wire Instructions: B/E Aerospace Consumables Management • JPMorgan Chase Bank New York
ABA: 021000021 • Account: 304639273 • SWIFT: CHASUS33 • CHIP UID: 0002



INVOICE NUMBER

HXH56Y

PAGE 2 OF 4

SOLD TO:

002409
DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY, ON
CANADA K6A 1K7

SHIP TO:

DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY, ON
CANADA K6A 1K7



ORDER NO.		DATE	SHIP VIA	TERMS		SHIPPING TERMS	
PO26710		12/04/14	FEDX INTL P1 COLL	NET 45		FOB-MIAMI	
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
4	50	Country of Origin: USA MS27039-4-14 SCREW ECCN :9A991 Country Origin: USA TARIFF: 7318.15.6080 MFR: MAC FASTENERS CTRL# : 2013I00496 LOT# : 65048 LOT QTY: 50 COUNTRY OF ORIGIN: USA Country of Origin: USA	0.300	EA	0	50 ✓	15.00 ✓
6	100	MS27039-5-12 SCREW ECCN :9A991 Country Origin: USA TARIFF: 7318.15.6080 MFR: LFC INDUSTRIES CTRL# : 2009I05844 LOT# : 48426 LOT QTY: 100 COUNTRY OF ORIGIN: USA Country of Origin: USA	1.070	EA	0	100 ✓	107.00 ✓
7	200	MS21083C8 LOCKNUT ECCN :9A991 Country Origin: USA TARIFF: 7318.16.0085 MFR: MACLEAN-ESNA CTRL# : 2008H05736 LOT# : 39223-000	1.550	EA	0	200 ✓	310.00 ✓
CONTINUED							

SP 14-12-5

MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY B/E AEROSPACE

MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY B/E AEROSPACE

ALL ITEMS ARE SUBJECT TO A 100% RESTOCKING CHARGE.

SHIPPED FROM: 10000 NW 15 TERRACE, MIAMI, FL 33172

ORIGINAL INVOICE

BY RECEIVING DELIVERY OF THE ITEMS COVERED BY THIS INVOICE, BUYER AGREES TO THE TERMS AND CONDITIONS OF SALE AT:
http://www.beconsumables.com/cm/conditions_of_sale.cfm



B/E Aerospace, Inc.

CONSUMABLES MANAGEMENT

Tel: +1.305.925.2600 • Fax: +1.305.507.7191 • www.beconsumables.com
Remit to Address: 88289 Expedite Way, Chicago, IL 60695-0001
Wire Instructions: B/E Aerospace Consumables Management • JPMorgan Chase Bank New York
ABA: 021000021 • Account: 304639273 • SWIFT: CHASUS33 • CHIP UID: 0002



INVOICE NUMBER

HXH56Y

PAGE 3 OF 4

SOLD TO:
002409

DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY, ON
CANADA K6A 1K7

SHIP TO:

DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY, ON
CANADA K6A 1K7



ORDER NO.		DATE	SHIP VIA	TERMS		SHIPPING TERMS		
PO26710		12/04/14	FEDX INTL P1 COLL	NET 45		FOB-MIAMI		
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION		PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
8	100	LOT QTY: 200 COUNTRY OF ORIGIN: USA Country of Origin: USA MS20470AD4-13 RIVET, SOLID ECCN :9A991 Country Origin: USA TARIFF: 7616.10.3000 MFR: ALLFAST FASTENING CTRL# : 2004C01289 LOT# : S040223004F LOT QTY: 100 COUNTRY OF ORIGIN: USA Country of Origin: USA		0.150	EA	0	100 ✓	15.00 ✓
10	100	CR3213-6-09 CR MAX RIVET Country Origin: USA TARIFF: 7318.23.0000 MFR: CHERRY AEROSPACE SANTA AN CTRL# : 2008J06174 LOT# : 87121317 LOT QTY: 100 COUNTRY OF ORIGIN: USA Country of Origin: USA <i>These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to U.S. law is prohibited.</i>		0.840	EA	0	100	84.00
CONTINUED								
MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY B/E AEROSPACE								

MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY B/E AEROSPACE

ALL ITEMS ARE SUBJECT TO A 100% RESTOCKING CHARGE.

SHIPPED FROM: 10000 NW 15 TERRACE, MIAMI, FL 33172

ORIGINAL INVOICE

BY RECEIVING DELIVERY OF THE ITEMS COVERED BY THIS INVOICE, BUYER AGREES TO THE TERMS AND CONDITIONS OF SALE AT:
http://www.beconsumables.com/cm/conditions_of_sale.cfm

BY RECEIVING DELIVERY OF THE ITEMS COVERED BY THIS INVOICE, BUYER AGREES TO THE TERMS AND CONDITIONS OF SALE AT:
http://www.beconsumables.com/cm/conditions_of_sale.cfm

1. Vendor (Name and Address)/Vendeur (Nom et adresse) B/E Aerospace Consumables Management P.O. Box 025263 Miami, FL 33102-5263		2. Date of Direct Shipment to Canada/Date d'expédition directe vers la Canada 12/04/2014	
		3. Other References (include Purchaser's Order No.) Autres références (inclure le n° de commande de l'acheteur) PO#: PO26710	
4. Consignee (Name and Address)/Destinataire (Nom et adresse) DART AEROSPACE LTD 1270 ABERDEEN ST HAWKESBURY, ON CANADA K6A 1K7		5. Purchaser's Name and Address (if other than Consignee)e) Nom et adresse de l'acheteur (S'il diffère du destinataire) DART AEROSPACE LTD 1270 ABERDEEN ST HAWKESBURY, ON CANADA K6A 1K7	
		6. Country of Transshipment/Pays de transbordement CANADA	
		7. Country of Origin of Goods Pays d'origine des marchandises USA	IF SHIPMENT INCLUDES GOODS OF DIFFERENT ORIGINS ENTER ORIGINS AGAINST ITEMS IN 12 SI L'EXPÉDITION COMPREND DES MARCHANDISES D'ORIGINES DIFFÉRENTES, PRÉCISER LEUR PROVENANCE EN 12.
8. Transportation: Give Mode and Place of Direct Shipment to Canada Transport: Préciser mode et point d'expédition directe vers le Canada FEDX INTL P1 COLL		9. Conditions of Sales and Terms of Payment (i.e. Sale, Consignment Shipment, Leased Goods, etc.) Conditions de vente et modalités de paiement (p. ex. vente, expédition en consignation, location de marchandises, etc.) NET 45	
		10. Currency of Settlement/Devises du paiement U.S. Currency	
11. No. of Pkgs Nbre de colis	12. Specification of Commodities (Kind of Packages, Marks and Numbers, General Description and Characteristics, i.e. Grade, Quality) Désignation des articles (Nature des colis, marques et numéros, description générale et caractéristiques, p. ex. classe, qualité)	13. Quantity (State Unit) Quantité (Préciser l'unité)	14. Unit Price Prix unitaire
1	PO#: PO26710 80-004-2-8 MS27039-1-04 MS27039-1-05 MS27039-4-14 MS27039-5-12 MS21083C8 MS20470AD4-13 CR3213-6-09	Invoice#: HXH56Y INSERT SCREW SCREW SCREW SCREW LOCKNUT RIVET, SOLID CR MAX RIVET	3.200 /EA 0.110 /EA 0.080 /EA 0.300 /EA 1.070 /EA 1.550 /EA 0.150 /EA 0.840 /EA
		100 800 200 50 100 200 100 100	320.00 88.00 16.00 15.00 107.00 310.00 15.00 84.00
		15. Total 955.00	
16. Total Weight/Poids Total Net Gross/Brut 16 lb 0oz		17. Invoice Total Total de la facture 955.00	
18. If any of fields 1 to 17 are included on an attached commercial invoice, check this box. Si les renseignements des zones 1 à 17 figurent sur la facture commerciale, cocher cette boîte. <input checked="" type="checkbox"/> Commercial Invoice No./N° de la facture commerciale		19. Exporter's Name and Address (if other than Vendor) Nom et adresse de l'exportateur (S'il diffère du vendeur) B/E Aerospace Consumables Management 10000 NW 15 TERRACE MIAMI, FL 33172	
20. Originator (Name and Address)/Expéditeur d'origine (Nom et adresse) Office Manager		21. Departmental Ruling (if applicable)/Décision du Ministère (S'il y a lieu)	
22. If fields 23 to 25 are not applicable, check this box Si les zones 23 à 25 sont sans objet, cocher cette boîte. <input checked="" type="checkbox"/>		23. If included in field 17 indicate amount: Si compris dans le total à la zone 17, préciser: (i) Transportation charges, expenses and insurance from the place of direct shipment to Canada Les frais de transport, dépenses et assurances à partir du point d'expédition directe vers le Canada \$(ii) Costs for construction, erection and assembly incurred after importation into Canada Les coûts de construction, d'érection et d'assemblage après importation au Canada \$(iii) Export packing Le coût de l'emballage d'exportation \$	
24. If not included in field 17 indicate amount: Si non compris dans le total à la zone 17, préciser: (i) Transportation charges, expenses and insurance to the place of direct shipment to Canada Les frais de transport, dépenses et assurances jusqu'au point d'expédition directe vers le Canada \$(ii) Amounts for commissions other than buying commissions Les commissions autres que celles versées pour l'achat \$(iii) Export packing Le coût de l'emballage d'exportation \$		25. Check (if applicable) Cocher (S'il y a lieu): (i) Royalty payments or subsequent proceeds are paid or payable by the purchaser De redevances ou produits ont été ou seront versés par l'acheteur <input type="checkbox"/> (ii) The purchaser has supplied goods or services for use in the production of these goods L'acheteur a fourni des marchandises ou des services pour la production des marchandises <input type="checkbox"/>	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO26710

Purchase Order Date 12/3/2014

PO Print Date 12/5/2014

Page Number 1 of 4

Order From :

VU-BEA001

Ship To : DART AEROSPACE LTD

B/E AEROSPACE INC
88289 EXPEDITE WAY
CHICAGO, IL 33172
USA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

REVISED

Contact Name

Vendor Phone

305-925-2600

Buyer

Customer POID

Chantal Lavoie

Customer Tax #

10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

Ship To Contact

Ship To Phone

Ship Via:

FedEx Overnight collect

Ship Acct:

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Ext Price
1	80-004-2-8	INSERT	12/5/2014 Yes 12/5/2014		100.00 ✓ Each	\$3.20	
Line Total:							
2	MS27039-1-04	Screw	12/5/2014 Yes 12/5/2014	FN	800.00 ✓ Each	\$0.11	
Line Total:							
3	MS27039-1-05	SCREW	12/5/2014 Yes 12/5/2014	FN	200.00 ✓ Each	\$0.08	

804-12

Note:

12/5/2014



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO26710**

Purchase Order Date 12/3/2014

PO Print Date 12/5/2014

Page Number 2 of 4

Order From :

VU-BEA001

B/E AEROSPACE INC
88289 EXPEDITE WAY
CHICAGO, IL 33172
USA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

305-925-2600

Ship To Contact

Ship To Phone

Ship Via:

FedEx Overnight collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

Line Total:

4 MS27039-4-14

SCREW

12/5/2014 FN

Yes

12/5/2014

50.00 ✓

Each

\$0.30

8214-125

Line Total:

5 MS27039-5-08

Screw

12/5/2014 FN

Yes

12/5/2014

100.00

Each

\$2.45

8214-125

Line Total:

6 MS27039-5-12

Screw

12/5/2014 FN

Yes

12/5/2014

100.00

Each

\$1.07

8214-125

Line Total:

Note:

12/5/2014



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO26710

Purchase Order Date 12/3/2014

PO Print Date 12/5/2014

Page Number 3 of 4

Order From :

VU-BEA001

Ship To : DART AEROSPACE LTD

B/E AEROSPACE INC
88289 EXPEDITE WAY
CHICAGO, IL 33172
USA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

305-925-2600

Ship To Contact

Ship To Phone

Ship Via:

FedEx Overnight collect

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

USD

FCA - (Free Carrier)

MS21083C8	Nut	12/5/2014	FN	200.00	✓	\$1.55
		Yes		Each		
		12/5/2014				

Line Total:

8 MS20470AD4-13	Rivet	12/5/2014	FN	100.00	✓	\$0.15
		Yes		Each		
		12/5/2014				

Line Total:

10 CR3213-6-9	Cherry Rivet	12/5/2014	FN	100.00	✓	\$0.84
		Yes		Each		
		12/5/2014				

CR3213-6-09 ACCEPTABLE

Line Total:

8 14-12-5

Note:

12/5/2014



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO26710**

Purchase Order Date 12/3/2014

PO Print Date 12/5/2014

Page Number 4 of 4

Order From :

VU-BEA001

Ship To : DART AEROSPACE LTD

B/E AEROSPACE INC
88289 EXPEDITE WAY
CHICAGO, IL 33172
USA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 305-925-2600

Ship To Contact

Ship To Phone

Ship Via: FedEx Overnight collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

11 71401-45

PROCUREMENT
QUALITY CLAUSES

12/5/2014

1.00

\$0.00

No

12/5/2014

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A032 PUBLIC LAW 101-592 FASTENER QUALITY ACT

A033 STATEMENT OF CONFORMITY/TEST RECORDS

FOR NAS, AN and MS FASTENERS

A040 NOTIFICATION OF QUALITY ESCAPE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENT

Line Total:

PO Total:

CL

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr:

3

Change Date: 12/5/2014



B/E Aerospace, Inc.

CONSUMABLES MANAGEMENT

www.beconsumables.com

Remit to Address: 88289 Expedite Way, Chicago, IL 60695-0001

Wire Instructions: B/E Aerospace Consumables Management - JPMorgan Chase Bank New York

ABA: 021000021 • Account: 304639273 • SWIFT: CHASUS33 • CHIP UID: 0002

Sales Quote 075R0P

TO: 002409
ATTN: CHANTAL LAVOIE
DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY, ON
CANADA K6A 1K7

FROM: LUCIE PILON
B/E AEROSPACE CONSUMABLES MANAGEMENT
P.O. BOX 025263
MIAMI, FL 33102-5263
TEL: +1.514.337.2122
FAX: +1.514-337-3989
EMAIL: Lucie_Pilon@beaerospace.com

QUOTE DATE: 12/03/14
EXPIRES : 01/02/15
CURRENCY : USD

REF# : RFQ
PHONE: 613-632-9577
FAX : 613-632-1053

ITM	QTY	PART NUMBER	PRICE	UM	EXT PRICE	DELIVERY	INFO
001	100	CR3213-6-09	0.8400	EA	\$ 84.00	stock	
COMMENT: stock in Miami (mfg. cofc and chem/phys)							
MANUFACTURER: 0155 CHERRY AEROSPACE SANTA ANA							

COMMENTS: Thank you,
Lucie

A \$100.00 ORDER MINIMUM IS REQUIRED FOR ALL CREDIT CARD ORDERS

ALL ORDERS SUBJECT TO 100% RESTOCKING CHARGE

QUOTES VALID FOR 30 DAYS

ALL STOCK SUBJECT TO PRIOR SALE

***THIS QUOTE IS SUBJECT TO B/E AEROSPACE'S TERMS AND
CONDITIONS OF SALE WHICH MAY BE VIEWED AT:
www.beconsumables.com/cm/docs/BE_CM_Conditions_of_Sale.pdf ***



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO26710

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
10	100	EA	CR3213-6-09		87121317	CHERRY AEROSPACE SAN	11815		


Jason Lewis
Vice President of Quality

12/04/14



**CHERRY®
AEROSPACE**

SPS Fastener Division, a PCC Company

Cherry Aerospace
1224 East Warner Avenue
Post Office Box 2157
Santa Ana, CA 92707-0157
SA



PACKING LIST

Order No: SO316058
Order Date: 11/13/07
Print Date: 10/13/08

Page: 1



Sold-To: 10015341

Ship-To: 19000244

S O L D T O	M&M AEROSPACE HARDWARE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

S H I P T O	M&M AEROSPACE HARDWARE
	10000 N.W. 15TH TERRACE
	MIAMI, FL 33172
	USA

Salesperson (s):110

Purchase Order: 0BZ464

Credit Terms: 1%10,30
1%10, Net 30

Ship Via: FEDEX NATIONAL
FOB: Origin - Collect

Remarks:

IF UNDER 150# SHIP FEDEX GROUND COLLECT ACCOUNT# 0331-0149-0
IF OVER 150# SHIP WATKINS MOTOR LINE ACCOUNT# 018757 - DO NOT INSURE
DO NOT PREPAY AND ADD TO ANY OF THE ABOVE METHODS
DO NOT SHIP EARLIER THAN TWO (2) WEEKS PRIOR TO DUE DATE, UNLESS SPECIFIED.

BRITISH AEROSPACE APPROVAL# BAe/AG/30158/MAA to BAe/AG/QC/SC1 PART 3
AIRBUS APPROVAL# 30114

GOODS OF UNITED STATES ORIGIN

FASTENERS ECCN: 9A991d SCHEDULE B# 8803300010
TOOLS ECCN: EAR99 SCHEDULE B# 8467290095

Ln	Item Number	Site T Location	Lot/Serial	Qty Open Qty to Ship	UM	Promised Shipped	
3	C 3213-6-09	1600			EA	10/30/08	
	Customer Item: ASNA007 1609						
	N S9301B-6-09						
		C1003	87121317	13866.0		()	

TEST REPORTS ENCLOSED

DO NOT DESTROY

CERTIFICATION

ATTENTION: PURCHASING DEPARTMENT

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

Quality Assurance Representative

Signed

SIM NGUYEN

100

100

100

100

100

100

100

100

Final Inspection & Test Report

CherryMax® Rivet

An ISO9001 and AS9100 registered company. OASIS #6111041606

Part Numbers: CR3213-6-09
Rev: AA
Proc. Spec.: PS-CMR-3000
Rev: R

Lot I.D. No.: 87121317

Lot Size: 14,891

See 2nd Page for the Customer Parts

MFG. Date: October 01, 2008

ASSEMBLY DATA

TYPE	ID #	CERT #	MATERIAL	FINISH	LUBE
Rivet	87110840	A58501	QQ-A-430/5005	MIL-C-5541 CLEAR CL1A	None
Stem	87110839	A59329	AMS6322 / 7040ST	QQ-P-416/T2CL2/CAD PL	None
Collar	AC00000	A59432	A-286 / AMS5731	Passivate per AMS2700	None

W.O. #: 500062

Final Lube: WAX

MECHANICAL STRENGTH TEST

INSTALLED SHEAR			TENSION		SPINDLE RETENTION	DISASSEMBLY
MIN REQ'D	8	N/A	635	N/A	290	10
SAMPLE SIZE	8	N/A	8	N/A	8	5
SPECS	C-N-M	B	C-N-M	B	C-N-M	B
RESULTS	2121		743		580	72
	2145		800		554	69
	2162		751		598	86
	2154		785		539	63
	2169		705		553	61
C=CR N=NAS	2097		800		601	
M=MIL B=BAC	2149		790		547	
LOAD VALUES	2148		750		567	
IN POUND						

METALLURGICAL AND OTHER RELATED TESTS/REQUIREMENTS

PCS.	ITEM	STATUS	PCS.	ITEM	STATUS
125	EXAMINATION	PASS	20	INSTALLATION (Min and Max Grips)	PASS
	Locking feature (missing collar/spindle)			Spindle Protrusion/Recession	
	Roundness/Concentricity			Collar Protrusion	
	Dimensional, ID Marks, Tool Marks/Mark			Blind Head Dia./Formation	
	Visual (grip/material code, ID)			Tightness in plate	
	Cracks, seams, folds				

Comments:
Blind Fastener

Tr. Rev: -
Rev. Date: 10/1/2008
Inspector
A Silva

Q Code
V09



Cherry Aerospace certifies that the product tested above conforms to all referenced specifications listed and that the original data are available for review upon sufficient notice. Cherry Aerospace further certifies that the articles listed above have been manufactured and inspected in accordance with FAA TSO-C148. The conditions and tests required for TSO approval of this article for minimum performance standards. Aircraft fasteners approved under this TSO are not necessarily interchangeable with other aircraft fasteners approved under this TSO. Substitution of parts may only be done if acceptable to or approved by the FAA Administrator.

This test report shall not be reproduced except in full, without the written approval of the laboratory.
The recording of false, fictitious, or fraudulent statement or entries on the certificate may be punished as a felony under Federal law.



CHERRY AEROSPACE
SPS System Division, a PCC Company



Chemical Processing
Heat Treating
ISO/IEC 17025
Material Testing Lab

1224 East Warner Avenue
Santa Ana, CA 92707-0157

An ISO9001 and AS9100 registered company. OASIS #6111041606

Final Inspection & Test Report CherryMax® Rivet

Lot I.D. No.: 87121317

Rev: -

Customer Parts List

Customer Part Number	Rev	Proc. Spec.	Rev
NAS9301E-S-6-09	4	NAS1000	3
ASNA0078A609	N	MIL-R-7385	D2
ASNA0078A609	N	NAS1036	3
ASNA0078A609	N	PS-CMP-3000	R
M7885/2-6-09	D	MIL-R-7385	D2
NAS9301E-6-09	4	NAS1000	3

Parts delivered in accordance with the standard amendments as agreed by Cherry/EADS.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1

THE UNIVERSITY OF CHICAGO

NICHOLS WIRE, INCORPORATED

SANTA ANA, CA 92707-0157

CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		OTHERS	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
		0.30		0.40		0.10	0.05	0.20	4.50	5.60	0.05	0.20	0.05	0.15	
	505	NICKEL		ZINC		TITANIUM		LEAD		BISMUTH					
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
					0.10										
ALUMINUM REMAINDER															

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

CERTIFIED TEST REPORT

600 KAISER DRIVE HEATH, OH 43056

SM-PTC

NICHOLS WIRE INC.
1547 HELTON AVE

FLORENCE

AL 35630

CHRON

NICHOLS WIRE INC.
1547 HELTON AVE

FLORENCE

AL 35630

NICHOLS 7147 01 4000 0 I

MADE IN USA

CUSTOMER PURCHASE ORDER NO. & ITEM				KASER ORDER NO.	
1235E				214492242	
ALLOY	CLAD	TEMPER	GAUGE	WIDTH	LENGTH
K540		F	37500	00.0000	000.000
ITEM ORDERED					
ALY-JUMBO					
CUSTOMER SPECIFICATION					
PART NUMBER			B/L NUMBER	DATE SHIPPED	
6237F4			7147	05/01/08	
WEIGHT SHIPPED		NO. OF PIECES	GOVT. CONTRACT NO.		
18 355		91			


CERTIFICATION

"KAISER ALUMINUM & CHEMICAL CORPORATION (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER HAS BEEN INSPECTED AND TESTED AND FOUND IN CONFORMANCE WITH THE APPLICABLE SPECIFICATIONS FORMING A PART OF THE DESCRIPTION SET FORTH IN KAISER'S SALES ORDER ACKNOWLEDGEMENT FORM. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS & CONDITIONS OF SALE."

John Despins
Technical Manager

LOT NUMBER	NO. OF TESTS	NONE							
84211	0	MIN MAX	N/A N/A						
80-SF			Cu .008	Fe .04	Si .06	Mn 4.58	Mg .03	Zn .07	Cr
84218	0	MIN MAX	N/A N/A						
80-SF			Cu .005	Fe .04	Si .06	Mn 4.65	Mg .02	Zn .07	Cr

PRODUCT MANUFACTURED FROM K54U MEETS THE REQUIREMENTS OF ALUMINUM ALLOY 5056



A58501

NICHOLS WIRE INC.
PO BOX 1118
MARIETTA GA 30067

ACC 371

JUN 07 2008

CHEMICAL COMPOSITION (WT.%)										
		Cu	Fe	Si	Mn	Mg	Zn	Cr	Others Each	Others Total
MIN	2			.05	.05	4.5		.05		
MAX	3	.10	.40	.30	.20	4.9	.10	.20	.05	.15
ALUMINUM REMAINDER										

ALUMINUM REMAINDER

1948

11-11-64

[illegible]

Abstract

[illegible]

1990



WireTech, Inc.

6440 E. Canning Street
Los Angeles, CA 90040
Phone (323) 722-4933
Fax (323) 721-2738

WELD TO

CHERRY AEROSPACE LLC
1724 E. WARNER AVENUE
SANTA ANA, CA 92705-5414
USA

WORK ORDER
063683

CERTIFICATION

HEAT NO.

534740

SALES ORDER / RLS

826228 / 1

ISO 9001-2000 REGISTERED



MECHANICAL TESTING
CERT # 911.01

CUSTOMER P.O. VPO92778	CUSTOMER PART M272.1345	QUANTITY 3,113 Lbs	CARRIERS 3	LADING NO 00073420	SHIPMENT DATE 08/15/2008
SPECIFICATION C208740-101345A A-8740, SKFG, CHQ WIRE, SEAM & DECARB FREE, SAIP Zinc Phosphate, Lime & Stearate Coating, Size: 0.135 Specifications: AMS 6322N, MIL-S-6049A, AMEND. 1, ASTM-A-547, AMS-S-6049-A, M272-1345, REV. P					
CERTIFICATION REQUIREMENTS					
Chemical Properties					
C	Si	Mn	S	Cu	Ni
0.11	.26	.93	.009	.17	.42
Physical Properties					
Grain Size	Jominy 1	Jominy 3	Inclusions	Macro	Cleanliness
6 J5=54	J8=43	0=42	S2-R1-C2	GOOD	F&S=0
Country of Origin			Mill Source		
USA - DEAR Compliant			Charter		
Mechanical Properties					
AUG 20 2008					
TEST	UNITS	Results			
Tensile Strength	KSI	118.2			
Yield Strength	KSI	100.5			
% Elongation	%	5			
% Reduction of Area	%	59.1			
Rockwell Hardness C Scale	HRC	24			
Decarb (all)	In	0.00			

Merchandise covered by this invoice is warranted to be free from defects in workmanship or material but not for any specific length of time, type or measure of service. No claim for allowance will be recognized unless presented in writing within 10 days time after receipt of material. Our maximum liability for any claim predicated upon defective merchandise is limited to replacement of it, or to repayment of it, or to repayment of the purchase price thereof, as we may elect. Material cut to specific length or size cannot be returned for credit and request for cancellation of such orders will not be considered if manufacture has been commenced. Buyer, by acceptance of the merchandise covered by this invoice, agrees to the foregoing terms and conditions and those set forth on the reverse hereof. The receipting of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal statutes including Federal law, Title 18, Chapter 47.

REPRODUCTION OF THIS CERTIFICATION IS NOT ALLOWED UNLESS IN FULL.

WireTech, Inc. metallurgical laboratory is accredited in the following tests: chemical analysis per ASTM E 415, mechanical testing per ASTM A 370, Rockwell hardness per ASTM E 18, metallographic exam, preparation per ASTM E 3, decarburization depth per ASTM E 1077, IFI 140, inclusion rating per ASTM E 45, decarburization performed as per IFI 140. The reported Chemical and Physical Properties are Mill Source results. Transcribed from mill certificates. HRC(W) are hardness results performed with a 1/16" carbide ball. Unless otherwise specified, HRC and HRC results are conversions from ASTM A370 tables 1 and 2. *Test result not covered by our current A2LA accreditation. Tests which have been undertaken by a subcontractor laboratory that is not accredited are not endorsed by A2LA or covered by WireTech, Inc. A2LA accreditation.

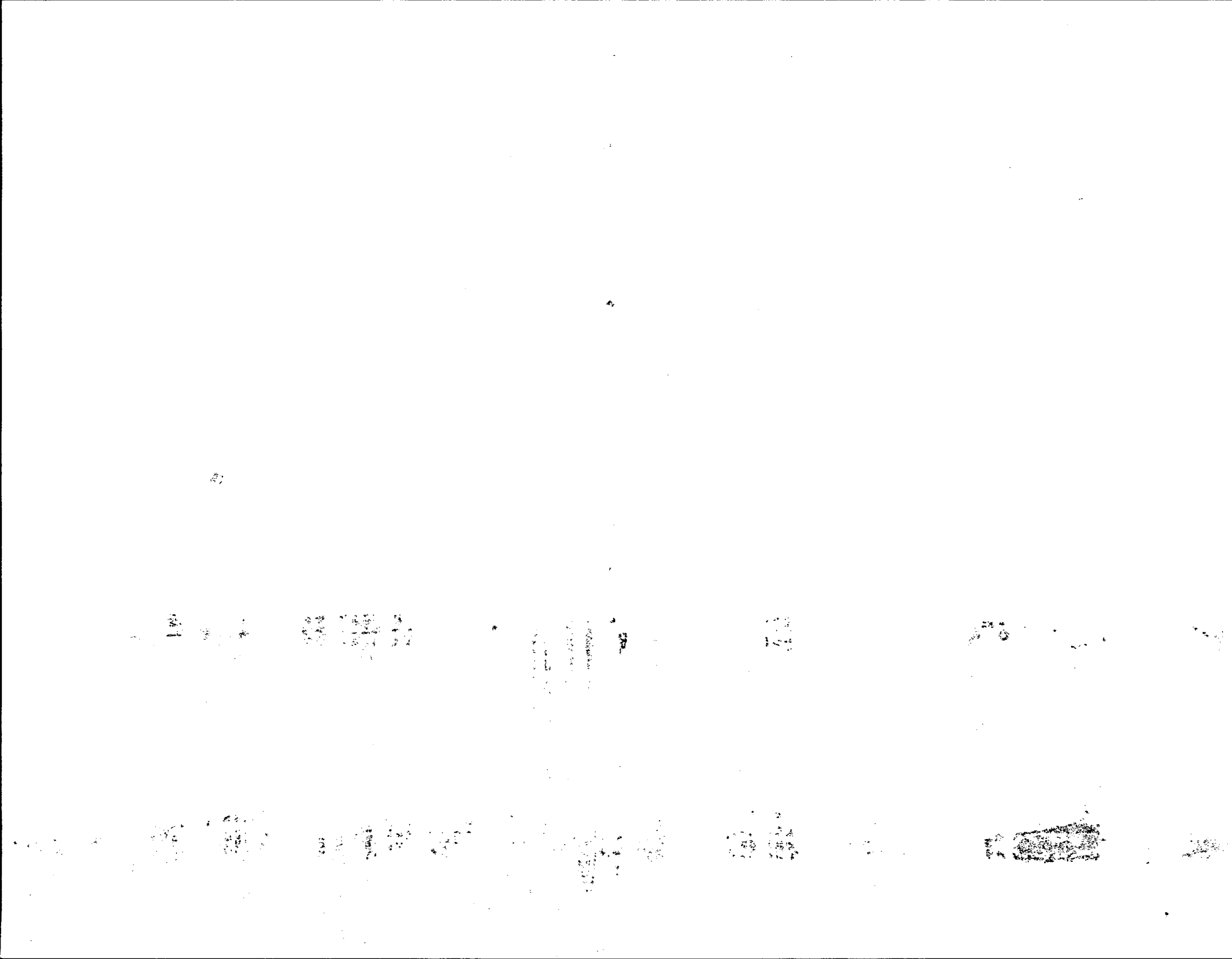
TEST RESULTS RELATE ONLY TO THE ITEMS TESTED

"LATEST REVISIONS OF ASTM"

J1

Material is free of mercury, radium, or alpha contamination.

A59329





CHARTER STEEL

A Division of
Chenier Manufacturing Company, Inc.

FILE

1658 Cold Springs Road

Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

CHARTER STEEL TEST REPORT

Reverse Has Text And Codes

Wiretech Incorporated
6440 East Canning Street
Los Angeles, CA 90040-
Attn: Janice Duran

Order #	6201-1
Part #	8740C1A060-C-R
Charter Sales Order #	263629
Part Description	534740
Part Material	549477
Part Grade	8740 R SK FG AQ
Part Process	SA
Part Size	1/4

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side and that it satisfies those requirements.

Lab Code: 7308

OUTS. SOURCE HEAT NUM. = N/R

Chemical	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
WT%	0.41	0.93	0.009	0.009	0.280	0.42	0.43	0.21	0.17	0.008	0.001

Chemical	AL	N	B	TI	NB
WT%	0.025	0.0070	0.0001	0.001	0.001

Jominy	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	59	58	67	58	54	52	50	46	45	42	40	39

Jominy	JOM13	JOM14	JOM15	JOM16	JOM17	JOM18	JOM19	JOM20	JOM21	JOM22	JOM23	JOM24	JOM25	JOM26	JOM27	JOM28	JOM29	JOM30	JOM31	JOM32
	37	37	38	36	35	31	33	33	32	32	32	31	31	31	31	31	31	31	31	

JOMINY SAMPLE TYPE ENGLISH = B JOMINY LAB = 0358-01

CHEM. DEVIATION EXT. - GREEN = N/R

MACRO ETCH SURFACE = 1 MACRO ETCH RATIO = 1 MACRO ETCH CENTER = 1

AMS 2301 FRQ AVE = 0.00 AMS 2301 FRQ IND = 0.00

AMS 2301 SEV AVE = 0.00 AMS 2301 SEV IND = 0.00



MAX ALLOWABLE DEFECT = 0.0000

QC DEVIATION EXT. - GREEN = N/R

Test Results of Rolling Lot # 391828

AUG 20 2008

TENSILE (KSI)	# of Tests	Test Results of Processing Lot # 549477			TENSILE LAB = 0358-02
		Min Value	Max Value	Mean Value	
REDUCTION OF AREA (%)	2	89.3	90.9	90.1	RA LAB = 0358-02
ROCKWELL B (HRBW)	2	63	64	63	RB LAB = 0358-02
ROCKWELL C (HRC)	2	82	86	84	RC LAB = N/R
	0	0	0	0	

NUM DECARB = 4 FREE FERRITE DECARB = 0.001 FREE FERR & PARTIAL DECARB = 0.001

CP SPHERO % LAB = 0358-02 NUM SPHERO = 4 SPHERODIZATION (%) = 81.9

QC DEVIATION EXT. - PROCESSED = N/R

Specifications:

Manufactured per Charter Steel Quality Manual Rev 8, 12-06-07
Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:
Customer Documents: COP 3010 Revision = M Dated = 12-MAR-2003

Additional Comments:

MEETS REQUIREMENTS OF SPECIFICATIONS
AMS6322N/AMS2301: MAIL-S-6049A

Charter Steel
Saukville, WI, USA



Janice Barnard
Janice Barnard
Manager of Quality Assurance
05/09/2008

Fax Number: (323) 728-6360

Rem: Load, Mail, Fax 0

Page 1 of 1

Certificate of Analysis

Radcliff Wire Inc. 97 Ronzo Rd., P.O. Box 603, Bristol, CT 06010

Date Shipped: 8/15/2008

PO #: VP091194

Qty. Shipped: 68 LBS-4-BLACK
MIG SPOOLS

Radcliff No.: 111444

Heat No.: 553701

Customer: CHERRY AEROSPACE
SANTA ANA OPERATIONS
1224 EAST WARNER AVE
SANTA ANA, CA 92705-5414

Country of Origin: USA

Original Mill Source: USA

Size: .009X.0165X.095

Material: A286 Stainless Steel

Description: SPECIAL SHAPE

Specification: AMS 5731 REV L CHM ONLY

Notes:

DFAR COMPLIANT
PART# M189.06 REV V
NET WGT 68 LBS

Chemical Properties

Al: 0.15%	B: 0.0062%	C: 0.04%	Cr: 13.88%	Mn: 0.17%
Mo: 1.2%	Ni: 24.39%	P: 0.015%	S: 0.0005%	Si: 0.21%
Ti: 0.24%	V: 0.22%			

Tensile: 94 KSI

Rockwell:

Certs/ Material

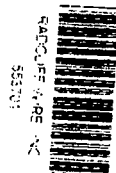
The material as shipped is free from mercury contamination



SEP 05 2008

Lisa Piatek
Lisa Piatek

Certification Clerk



A59432

CERTIFICATE OF TESTS

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE

CERT SERIAL# 000655192



CARPENTER

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa. 19601
Tel: (610) 208-2000, (800) 338-4592

08/11/08

CUSTOMER / BESTELLER / CLIENT

- THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW TITLE 18, CHAPTER 47.
- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSIS AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

SELLER / VERKÄUFER / VENDEUR PAGE 1 OF 1

RADCLIFF WIRE INC
PO BOX 603
BRISTOL, CT 06011

CARPENTER TECHNOLOGY CORP

101 W. BERN STREET
READING, PA 19601

CUSTOMER ORDER NO. / BESTELL-NR. / N° DE COMMANDE	CARPENTER NO. / WERKS-NR. / N° DE REFERENCE INTERNE	DATE / DATUM / DATE	WEIGHT / GEWICHT / POIDS
39431	PHL159401 L37767	08/11/08	565.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE: 553701

PRODUCT DESCRIPTION: CONSUMET A286 ANNEALED COLD FINISH

SIZE 0.053000 IN. (1.35 MM) RD WIRE

PRIMARY HEAT CHEMISTRY (WT%): (TEST METHOD IS SHOWN IN PARENTHESIS)

C (OES)	MN (XRF)	SI (XRF)	P (OES)	S (OES)	CR (XRF)
0.040	0.17	0.21	0.015	0.0005	13.88
NI (XRF)	MO (XRF)	AL (OES)	TI (OES)	V (XRF)	B (OES)
24.39	1.20	0.15	2.24	0.22	0.0062

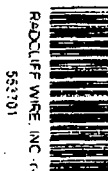
TENSILE AS SHIPPED, KSI (MPA) 110.0 (758)

MATERIAL PRODUCED ON THIS ORDER WAS MELTED AND MANUFACTURED IN THE U.S.A.
MATERIAL HAS BEEN MELTED IN USA OR QUALIFYING COUNTRY TO DFARS REQUIREMENTS 252.225-7014 WITH ALTERNATE 1 FOR QUALIFYING COUNTRY 225.872.1.
CARPENTER'S QUALITY MANAGEMENT SYSTEM WAS REGISTERED AS OF SEPTEMBER 2, 2004 TO THE REQUIREMENTS OF ISO 9001:2000 APPROVAL CERTIFICATE 07-0869 BY PERFORMANCE REVIEW INSTITUTE. CERTIFICATE OF TEST IS PREPARED IN ACCORDANCE WITH PARAGRAPH 3.1 OF EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS.

KAY C. DANTZLER
MET RELEASE / CERT ANALYST
CARPENTER TECHNOLOGY CORPORATION



SEP 05 2008



A59432

This certification is made to the customer printed on this form. Carpenter neither makes, nor assumes responsibility for, any representation or certification by other parties.
Diese bescheinigende Zertifizierung ist nur für den in diesem Formular genannten Kunden gültig. Carpenter übernimmt gegenüber Dritten keine Haftung für die aus gegebenen Daten oder Zertifizierungen.
Cet attestation est uniquement valable pour le client dont le nom est imprimé sur ce formulaire. Carpenter n'assume pas de responsabilité pour la certification vis-à-vis d'une tierce personne.

Kay C. Dantzler



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172

Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO26710

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR	DATE	EXP DATE
7	200	EA	MS21083C8		39223-000	MACLEAN-ESNA	019L2			


Jason Lewis
Vice President of Quality

12/04/14



MACLEAN-ESNA

MANUFACTURER'S AFFIDAVIT

I, Cliff Hufstedler hereby certify that the below named parts
(Name)

were manufactured by MacLean-ESNA located at
(Company Name)

611 Country Club Rd. Pocahontas, AR 72455
(Street Address) (City) (State) (Zip Code)

Part No.	Part Description
<u>180846 79NTE-080</u> <u>Cust PN MS21083C8</u>	<u>Steel Nuts</u>

I further certify that should any change in the manufacturing process occur which changes the country of origin, I will immediately notify M&M Aerospace Hardware, Inc. in writing and provide a new Manufacturer's Affidavit.

Cliff Hufstedler
(Signature)

Plant Manager
(Title)

8/14/08
(Date)

MACLEAN-ESNA
A MACLEAN-FOGG COMPANY
611 COUNTRY CLUB ROAD
POCAHONTAS, ARKANSAS 72455
(870) 892-5201

TO: M&M AEROSPACE HARDWARE
10000 N.W. 15 TERRACE
MIAMI, FL 33172

DATE: 8/19/2008

SUBJECT:	YOUR ORDER NUMBER	OFL390	ITEM NUMBER	1
	ESNA ORDER NUMBER	052910		
	FSCM/ CAGE NUMBER	019L2		
	YOUR PART NUMBER	MS21083C8		
	CERTIFIED AS	MS21083C8 PER NASM21083 REV 1		
	ESNA PART NUMBER	79NTE-080		
	QUANTITY	50000		
	PACKING LIST NUMBER	46527		
	SHOP ORDER NUMBER	39223 - 000		

Gentlemen:

This is to certify that all applicable plating, heat treating, and inspection processing and that all material used in the manufacture of subject parts conform to the specification or drawings received by ESNA and set forth in the subject purchase order; that the parts are of good material and workmanship; and that all necessary records, including chemical and physical where applicable, will be made available for review upon request. The inspection and test reports provided represent the actual attributes of the items furnished on this contract and indicate full compliance with all applicable specification and contract requirements.

This is to certify that the materials supplied against the subject order are free of contamination by presence of mercury.

Very truly yours,

MACLEAN-ESNA
A MACLEAN-FOGG COMPANY

Max Kildow

Jim Earley
Quality Assurance Manager

NOTE: The magnetic permeability of subject parts was tested and found to be less than 2.0 (air = 1.0) for a field strength of H = 200 oersteds using an indicator in accordance with ASTM A342.

100-443887-100

4

— "Tyranny"
— "Tyranny" (continued)

14-00000

(continued)

23

20

3.

Journal of Interpersonal Violence 26(10)

36

MACLEAN-ESNA
A MACLEAN-FOGG COMPANY
POCAHONTAS, ARKANSAS 72455

CERTIFICATE OF QUALITY COMPLIANCE

DATE: 8/19/2008

TO: M&M AEROSPACE HARDWARE
16000 N.W. 15 TERRACE
MIAMI, FL 33172

ESNA PART NO. 79NTE-080
MANUFACTURER'S LOT SIZE 55929 (APPROX. WT. COUNT)
MANUFACTURED UNDER SHOP ORDER NUMBER 39223 - 000
ORIGINATED AS SHOP ORDER NUMBER

ACCEPTANCE TESTS PER NASM 25027

MATERIAL RAW MATERIAL TYPE .750 HEX 303 SS BAR DATE MFG: 07-08
RAW MATERIAL CONFORMS TO AMS 5640 TYPE 1 AS EVIDENCED BY THE ATTACHED MILL CERTIFICATION. ESNA SHOP
ORDER NO. 39223 - 000 MILL HEAT NO. 736973 VENDOR CARPENTER TECHNOLOGY
RED NYLON IS A TRADEMARK OF ELASTIC STOP NUT. THIS ASSURES TRACEABILITY OF PARTS TO SOURCE. MATERIAL
CERTIFICATION WITH HEAT NUMBERS ASSURES TRACEABILITY TO VENDOR OF RAW MATERIAL. NONMETALLIC INSERT
CONFORMS TO ASTM D4066-00. (ZYTEL 103)

FINISH FINISH TYPE PASSIVATED PER QQ-P-35C
LUBRICANT TYPE WAX LUBRICANT

AXIAL LENGTH REQUIRED LBS. MINIMUM 7,400 ALL SAMPLE PIECES TESTED MEET OR EXCEED
EXCEEDS LBS. 8,000 MINIMUM REQUIREMENTS.
SAMPLE SIZE 15 PIECES.

WORKMANSHIP CONFORMS DIMENSIONALLY TO MS21083C8 PER NASM21083 REV 1
STANDARD: BEARING SURFACE SQUARENESS AS SPECIFIED PER NASM 25027

DISCONTINUITIES

WITHIN LIMITS PER NASM 25027 AND MIL-STD-271D/ACN 1/ AND REV E/ NOTICE 2/ AND REV F/ NOTICE 1.

MT PER SPEC 725	SAMPLE SIZE(MT - PCS):	0
	ACCEPTED(PCS):	N/A
PT PER SPEC 731 AA	SAMPLE SIZE(PT - PCS):	32
	ACCEPTED(PCS):	32

LOCKING TORQUE MAXIMUM LOCKING(IN. LBS.): 150
MINIMUM BREAKAWAY(IN. LBS.): 18
1ST CYCLE MAXIMUM LOCKING(IN. LBS.): 50
7TH CYCLE MAXIMUM LOCKING(IN. LBS.): 50
15TH CYCLE MAXIMUM LOCKING(IN. LBS.): 48
15TH MINIMUM BREAKAWAY(IN. LBS.): 38
ALL SAMPLE PIECES MEET OR EXCEED MINIMUM REQTS.
SAMPLE SIZE 15 PIECES

MERCURY FREE CLAUSE WE CERTIFY THAT NO POSSIBILITY EXISTS FOR MERCURY CONTAMINATION TO OCCUR
DURING MANUFACTURE, ASSEMBLY, OR TESTING OF PARTS ON THIS CONTRACT.

I CERTIFY THAT THE ABOVE TEST RESULTS AND STATEMENTS ARE CORRECT AND REPRESENT THE PRODUCTS AS SUPPLIED.

FSCM/CAGE NO. 019L2
COQC-NASM REV. 6-18-01

SIGNATURE *Mara Kildow*
for JIM EARLEY, QUALITY ASSURANCE MANAGER

1944
JAN 10
1944

1944
JAN 10
1944

1944
JAN 10
1944

1944
JAN 10
1944

1944
JAN 10
1944

1944
JAN 10
1944

1944
JAN 10
1944

1944
JAN 10
1944

1944
JAN 10
1944

1944
JAN 10
1944

1944
JAN 10
1944

1944
JAN 10
1944

CERTIFICATE OF TESTS

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE

CERT. SERIAL# 000644070



CARPENTER

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa 19601
Tel: (610) 208-2000 (800) 338-4592

- THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

07/02/08

CUSTOMER / BESTELLER / CLIENT

SELLER / VERKÄUFER / VENDEUR PAGE 1 OF 1

MACLEAN - ESNA
111 COUNTRY CLUB RD
ECCA HONTAS, AR 72455

CARPENTER TECHNOLOGY CORP

101 W. BERN STREET
READING, PA 19601

hmib 26457
PO 17162
3/4 nomhex

CUSTOMER ORDER NO. / BESTELL-NR. / N° DE COMMANDE	CARPENTER NO. / WERKS-NR. / N° DE REFERENCE INTERNE	DATE / DATUM / DATE	WEIGHT / GEWICHT / POIDS
17162 39223 - 000	CHI175901 L11939	07/02/08	3992.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE: 736973

PRODUCT DESCRIPTION: PROJECT 70+ TYPE 303 STAINLESS ANNEALED COLD DRAWN

SPECIFICATION: AMS 5640 REL U (10/ /07) (TYPE 1)
ASTM-A582-05

SIZE 0.750000 IN. (19.05 MM) HEX BAR

PRIMARY HEAT CHEMISTRY (WT%) (TEST METHOD IS SHOWN IN PARENTHESIS)

C (COM) 0.02	MN (XRF) 1.72	SI (XRF) 0.38	P (XRF) 0.02	S (COM) 0.38	CR (XRF) 17.34
NI (XRF) 9.65	MO (XRF) 0.54	CU (XRF) 0.92			

MATERIAL PRODUCED ON THIS ORDER WAS MELTED AND MANUFACTURED IN THE U.S.A.

THIS MATERIAL WAS MANUFACTURED IN ACCORDANCE WITH CARPENTER SPECIALTY ALLOYS OPERATIONS QUALITY PROGRAM MANUAL REVISION 27, DATED 1/08.

NO WELD REPAIR.

SOLUTION ANNEALED TO PROVIDE A MICROSTRUCTURE FREE FROM CONTINUOUS GRAIN BOUNDARY CARBIDE PRECIPITATION (NETWORK).

MAX PERMEABILITY - 1.20

HARDNESS AS SHIPPED, HBW - 226 (MIDRADIUS)

YIELD STRENGTH, (0.20 %) KSI (MPA)	77.0 (531)
TENSILE STRENGTH, KSI (MPA)	98.0 (676)
ELONGATION IN 2.00", %	32.0
REDUCTION OF AREA, %	54.0

MATERIAL PRODUCED ON THIS ORDER WAS MELTED AND MANUFACTURED IN THE U.S.A. MATERIAL HAS BEEN MELTED IN USA OR QUALIFYING COUNTRY TO DFARS REQUIREMENTS 252.225-7014 WITH ALTERNATE 1 FOR QUALIFYING COUNTRY 225.872.1. CARPENTER'S QUALITY MANAGEMENT SYSTEM WAS REGISTERED AS OF SEPTEMBER 2, 2004 TO THE REQUIREMENTS OF ISO 9001:2000 APPROVAL CERTIFICATE 07-0869 BY PERFORMANCE REVIEW INSTITUTE. CERTIFICATE OF TEST IS PREPARED IN ACCORDANCE WITH PARAGRAPH 3.1 OF EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS.

MICHELE L. HEFFNER
MET RELEASE/REQUIREMENTS ANALYST
CARPENTER TECHNOLOGY CORPORATION

Michele L. Heffner

1080010750

This certification is made to the customer printed on this form. Carpenter neither makes, nor assumes responsibility for, any representation or certification to other parties.
Die vorliegende Zertifizierung ist nur für den in diesem Formular genannten Kunden gültig. Carpenter übernimmt gegenüber Dritten keinerlei Haftung für die ausgewiesenen Daten oder Zertifizierungen.
Ce certificat est un document valable pour le client dont le nom est imprimé sur ce formulaire. Carpenter n'assume pas de responsabilité pour une certification vis-à-vis d'une tierce personne.



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172

Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO26710

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
4	50	EA	MS27039-4-14		65048	MAC FASTENERS	ORFT4		


Jason Lewis
Vice President of Quality

12/04/14

Inv # 12/04/14

MAC FASTENERS, INC.
1110 ENTERPRISE
OTTAWA, KANSAS 66067

**CERTIFICATE OF CONFORMANCE
AND
MANUFACTURER'S AFFIDAVIT**

CUSTOMER: B/E AEROSPACE

PO: 0KLK17

PART NUMBER: MS27039-4-14

REV: 3

LOT NUMBER: 65048

MANUFACTURED QUANTITY: 60,000

MILL HEAT NUMBER: 8192216

COUNTRY OF ORIGIN: UNITED STATES OF AMERICA

DFA: 252.225.7009 Compliant

MERCURY FREE CERTIFICATION

MacFasteners Inc. certifies that the parts referenced in the above lot number do not contain Mercury or Mercury compounds, and were manufactured in a Mercury free environment.

We certify that the parts furnished against the above referenced purchase order were manufactured by MAC FASTENERS, INC. within the United States, and were processed in accordance with all applicable drawings and specifications.

Objective evidence of compliance is on file, subject to examination upon request.

DATE: 08/21/13


QUALITY ASSURANCE REPRESENTATIVE

MacFasteners, Inc. is an AS9100C Registered Company- SAI GLOBAL - 0058029

MAC FASTENERS, INC.
1110 EAST ENTERPRISE
OTTAWA, KS 66067

CHEMICAL & PHYSICAL TEST REPORT

CUSTOMER B/E AEROSPACE	PO NUMBER OKLK17	MFG QUANTITY 60,000	DATE 08/21/13
PART NUMBER MS27039-4-14	REV 3	LOT NO 65048	PROCUREMENT SPEC NASM7839

MATERIAL TYPE 8740				MATERIAL SPECIFICATION MIL-S-6049/AMS6322				MILL HEAT NUMBER 8192216			SUPPLIER JOHNSTOWN		
C .41	Si .24	Mn .84	P .007	S .010	Cu .05	Ni .42	Cr .48	Mo .22	V .003	B	Fe	Al .024	Ti
	Co	N .0051	BI	Pb	Mg	Zn		Nb	Sn .004			Other	

MECHANICAL TEST RESULTS - TESTING PER NASM1312

ULTIMATE TENSILE STRENGTH POUNDS	
5,650	5,650
5,640	5,670
5,660	5,640
5,650	5,640
5,640	5,630
5,660	
5,650	
5,640	
MIN. REQ. 4,550	

DOUBLE SHEAR STRENGTH POUNDS / PSI
TOO SHORT TO TEST PER NASM1312-13
MIN. REQ.

HARDNESS	
ROCKWELL "C" SCALE	
REQ.	26 - 32 HRC
SAMPLE SIZE	13
ACTUAL RESULTS	
31 - 32 HRC	

METALLURGICAL EXAMINATION			
Discontinuities	<input checked="" type="checkbox"/>	Carb/Decarb	<input checked="" type="checkbox"/>
Grain Flow	<input checked="" type="checkbox"/>	Microstructure	<input checked="" type="checkbox"/>
Grain Size	<input checked="" type="checkbox"/>	Appearance	<input checked="" type="checkbox"/>
Thread Inspection FED-STD-H28/20 - ASME B1.3			
System 21	<input type="checkbox"/>	System 22	<input checked="" type="checkbox"/>
System 23	<input type="checkbox"/>		

NDT/ ADDITIONAL TESTS	
Magnetic Particle Inspection per ASTM E1444	<input checked="" type="checkbox"/>
Liquid Penetrant Inspection per ASTM E1417	<input type="checkbox"/>
Recess Torque Test	<input type="checkbox"/>
Head Marking	<input checked="" type="checkbox"/>
Magnetic Permeability ASTM A342 less than 2.0	<input type="checkbox"/>

TEST CERTIFICATION

WE CERTIFY THAT THE PART NUMBER, LOT NUMBER, AND SAMPLES REFERENCED ABOVE HAVE BEEN TESTED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATION FOR THE TESTS REPORTED HEREIN. THIS CERTIFICATION SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE APPROVAL OF MAC FASTENERS, INC.


Quality Assurance Representative

AS9100C REGISTERED
SAI GLOBAL - 0058029

MAC FASTENERS, INC.
1110 ENTERPRISE
OTTAWA, KANSAS 66067

HEAT TREAT CERTIFICATION

CUSTOMER: B/E.AEROSPACE

DATE: 08/21/13

PO NUMBER: 0KLLK17

MANUFACTURED QUANTITY: 60,000

PROCESSOR:

BODYCOTE MCLEAN - NADCAP ID 4464

LOT NUMBER: 65048

MATERIAL: TYPE 8740

PART NUMBER: MS27039-4-14

REVISION: 3

REQUIRED HARDNESS: 26 - 32 HRC

SAMPLE SIZE: 13

HARDNESS: 31 - 32 HRC

HEAT TREAT SPECIFICATION AS APPLICABLE: MIL-H-6875/AMS-H-6875/AMS2759/AMS5853/PS-1001

Notes:

The fasteners referenced in this report have been processed, inspected and certified by the Heat Treat Contractor in accordance with all applicable drawings and specifications. Heat Treatment has been verified in accordance with procurement specification and part drawing, by metallurgical and mechanical testing as applicable. Evidence of compliance as well as certification from the Heat Treat Contractor is on file and subject to examination upon request.


QUALITY ASSURANCE REPRESENTATIVE

MacFasteners, Inc. is an AS9100C Registered Company - SAI GLOBAL - 0058029

COMMERCIAL PLATING COMPANY

TC-4500 XRF ST

Tue Apr 15 07:26:03 1997

COMMERCIAL PLATING CERTIFICATION AND TEST RESULTS

This is to certify that the order described below was plated to comply with the agreed upon requirements of the requested specification.

DATE: 08/12/13

CUSTOMER: MAC FASTENERS

PART NUMBER: MS27039-4-14

DESCRIPTION: SCREW

ORDER NUMBER: 88899

LOT NUMBER: 65048

TOTAL WEIGHT: 845 LBS

PIECES PLATE TO GAUGE: 182

SPECIFICATION: SAE AMS QQ-P-416C, TYPE II, CLASS 2

REQUIREMENTS: 0.0003 CADMIUM AND YELLOW CHROMATE

AUTHORIZED SIGNATURE:

TITLE: QUALITY CONTROL MANAGER



Johnstown Wire Technologies

124 Laurel Ave,
Johnstown, PA 15906

Phone: 814-532-5680
Fax: 814-532-5684

WORK ORDER
544817

TEST REPORT
LOT NUMBER
K-8192216
SALES ORDER / RLS
001236 / 1

SOLD TO

Mac Fasteners, Inc.
C/O TD Logistics Inc.
14505 W 100th Street
Lenexa, KS 66215
USA



CUSTOMER P.O. 50516	CUSTOMER PART 8740-.2465	QUANTITY 7,890 LBS	COILS 4	LADING NO 00117188	SHIPMENT DATE 05/03/2013
SPECIFICATION MacFast-87246 AMS2301; AMS6322; AMS-S-6049A; MIL-S-6049A 8740 DFARS TS 95000 PSI Max Defense Federal Acquisition Regulation Supplement Silicon Killed Fine Grain Aircraft Quality/Cold Heading Quality Drawn From Annealed Rod Spherodize Annealed In Process Heavy Phos & Light Lube Ctd Size: .2465 +.0005 -.0005					
CERTIFICATION REQUIREMENTS					
Chemical					
C .41	Mn .84	P .007	S .010	Si .24	Al .024
Ni .42	Cr .48	Mo .22	Cu .05	V .003	
Cb .000	Ti ???????	N .0051	Sn .004		
Physical					
AMS 2301 0000	J1 57	J10 37	J11 35	J12 34	J2 57
					J3 56
					J5 53
					J4 55
					J6 50
					J7 46
					J8 42
					J9 39
MacroClean E-381 111					
Mechanical					
TEST	UNITS	HIGH	LOW	AVERAGE	
Tensile Str	Lbs/SqIn	86000	83000	85000	
RA Per Cent	Percent	73.0	72.6	72.8	
Decarb FFD	Inches	.000	.000	.000	
Surface def. depth	Inches	.000	.000	.000	
Rod / Melt Source					
Rod Source Republic	Melt Source Republic	Country of Origin USA	Nafta Yes		
End of Certification					

I certify that the results are a true and correct copy of the records prepared and maintained by JOHNSTOWN WIRE TECHNOLOGIES in compliance with the requirements of the cited specification. Chemistry is as reported by the rod / bar supplier and is not in JWT A2LA accreditation. This test report cannot be reproduced or distributed except in full without the written permission of JOHNSTOWN WIRE TECHNOLOGIES. The test results certified herein relate only to the items tested.

Daniel J. Mallik
Daniel J. Mallik, Director of Quality Assurance

\$1



1807 EAST 28TH ST.
 JOHNSTOWN, PA 15136-5880

LOHAS, OH 44035
 FAX: 330-438-5493

CERTIFICATE OF TESTS

REPUBLIC STEEL

11/29/2012 9:11:00 AM

PAGE 1 OF 2

PURCHASE ORD: 83162
 PART NUMBER: FXT40AA-.375
 ORDER NUMBER: 1532905 - 01
 HEAT: 8192216

PURCHASE ORDER DATE: 10/2/2012
 ACCOUNT NUMBER: 5672-1920-01
 SCHEDULE: 6752-92
 REVISION: 1

----- CHARGE ADDRESS -----

SHIP TO -----

JOHNSTOWN WIRE TECHNOLOGIES
 124 LAUREL AVE
 JOHNSTOWN, PA 15906

JOHNSTOWN WIRE TECHNOLOGIES
 EDWARD ZAPOLA
 124 LAUREL AVE
 TRUCK STPO 9 ROD DOCK
 JOHNSTOWN, PA 15904

----- MATERIAL DESCRIPTION -----

HOT ROLLED STEEL COILS ALLOY AMS 2301K JOHNSTOWN WIRE SPEC RW-100 REVISION DTD 04/21/04 EXC PARA
 10.3 AMS 6322N EXC HARD JOHNSTOWN WIRE SPEC RW-005 REVISION DTD 12/31/00 EXC SURFACE DEFECTS
 JOHNSTOWN WIRE SPEC PART NO. FXT40AA REVISION DTD 12/31/00 MIL S 6049A & AMD 1 COND B-1 EXC MARK &
 UT WAIVED EF-AISI-8740-H FINE GRAIN VACUUM DEGAUSED AIRCRAFT QUALITY FIXED PRACTICE QUALITY
 RESTRICTED CHEMISTRY RESTRICTED MAX INCIDENTAL ELEMENTS
 SIZE: RDS .3750 DIAM X COIL
 RDS 9.5250MM DIAM X COIL

----- LADLE CHEMISTRY % -----

C	MN	P	S	SI	CU	NI	CR
0.41	0.84	0.007	0.010	0.24	0.05	0.42	0.48
V	MO	SN	AL	B	CB	N	
0.003	0.22	0.004	0.024	0.0000	0.000	0.0051	

----- CALCULATED TESTS -----

REDUCTION RATIO 1.177.6 TO 1

AUSTENITIC GRAIN SIZE 5 OR FINER BASED ON A TOTAL ALUMINUM CONTENT EQUAL TO OR GREATER THAN .020% PER
 ASTM A29.

----- SEMI - FINISHED RESULTS -----

JOMINY HARDNESS TEST

SAE J406/ASTM A255

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32
 57 57 56 55 53 50 46 42 39 37 35 34 33 32 31 31 29 29 28 28 27 27 27

MACRO ETCH TEST

ASTM E381/MIL STD 430

ETCHANT: HCL TEMPERATURE: 170

AVG	S	R	C
1	1	1	1

MAGNETIC PARTICLE TEST

AMS 2301 AMS2304 AMS2300

IND	AVG	IND	AVG
FREQ	FREQ	SEV	SEV
PCE 03	0	0	0

----- FINISHED SIZE RESULTS -----

DECARBURIZATION TEST

SAE J419/ASTM E1077/JIS G0558

ETCHANT = NITAL

MAGNIFICATION = 100X

SPIKE	COMPLETE	TOTAL
INCHES	INCHES	DEPTH
PCE 15116	0.001	0
		INCHES
		0.001

CAPABLE OF SEAM DEPTH 1% MAX DIAMETER NOT LESS THAN .005 MAX

G. KRUTH

BY DEBORAH STOKES

DIRECTOR QUALITY ASSURANCE

1801 EAST 28TH ST.
PHONE: 330-438-5580LORAIN, OH 44035
FAX: 330-438-5686

CERTIFICATE OF TESTS

REPUBLIC STEEL

11/29/2012 9:11:00 AM

PAGE 2 OF 2

PURCHASE ORD: 83162
PART NUMBER: FXT40AA-.375
ORDER NUMBER: 1532905 - 01
HEAT: 8192216PURCHASE ORDER DATE: 10/2/2012
ACCOUNT NUMBER: 5672-1920-01
SCHEDULE: 6752-92
REVISION: 1

NOTES

CHEMICAL ANALYSIS CONFORMS TO APPLICABLE SPECS: ASTM E415, LBL10129, LBL10130, ASTM E1019, LBL10158, LBL10114, AND ASTM E1085, LBL10184, LBL10188.

REPUBLIC STEEL HEREBY CERTIFIES THAT THE MATERIAL LISTED HEREIN HAS BEEN INSPECTED AND TESTED IN

NOTES (CONTINUED)

ACCORDANCE WITH THE METHODS PRESCRIBED IN THE GOVERNING SPECIFICATIONS AND BASED UPON THE RESULTS OF SUCH INSPECTION AND TESTING HAS BEEN APPROVED FOR CONFORMANCE TO THE SPECIFICATIONS.

CERTIFICATE OF TESTS SHALL NOT BE REPRODUCED EXCEPT IN FULL.

ALL TESTING HAS BEEN PERFORMED USING THE CURRENT REVISION OF THE TESTING SPECIFICATIONS.

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FED STATUTES TITLE 18 CHAPTER 47.

THE MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURE DURING PROCESSING OR WHILE IN OUR POSSESSION.

NO WELD OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL.

THE RESULTS REPORTED RELATE ONLY TO THE ITEMS TESTED.

SOURCE INFORMATION

MELT SOURCE: CANTON CAST ROLL MELT COUNTRY: U.S.A HOT ROLL SOURCE: LORAIN 9/10, U.S.A
MELT METHOD: EF BLOOM RED. RATIO: 1177.6

END OF DATA

CC

END OF DATA

WITH SHIPMENT 1 COPY PRINTED AT SHIPPING AREA

FAX SHIP TO 1 COPY ATTENTION EDWARD ZAPOLA

1-814-532-5684

FILE 1 COPY

G. KRUTH
DIRECTOR QUALITY ASSURANCE

BY DEBORAH STOKES



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO26710

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
8	100	EA	MS20470AD4-13		S040223004F	ALLFAST FASTENING	53551		


Jason Lewis
Vice President of Quality

12/04/14



ALLFAST

FASTENING SYSTEMS, INC.

TWX: 910-584-315 | 15200 DON JULIAN ROAD, CITY OF INDUSTRY, CA 91745-1098 | PHONE: (626) 968-9388 | FAX: (626) 968-9393

CERTIFICATE OF CONFORMANCE

DATE: 22-Feb-04

CERTIFICATION NUMBER: 45883

CUSTOMER NAME: M & M AEROSPACE

NOMENCLATURE: Solid Rivet

PURCHASE ORDER: OW5528

QUANTITY: 256 LB

PART NUMBER: MS20470AD4-13 REV: NEW

SHIPPER NUMBER: 392524

LOT CONTROL NUMBER: S040223004F

DATE OF MANUFACTURE: 19-Jan-04

MATERIAL LOT NO: S944003

HEAT LOT NUMBER: K-832347

MATERIAL VENDOR: NICHOLS WARE

MATERIAL TYPE: 2117-T4

PROCUREMENT SPECIFICATION: NASM5674 REV. NEW

SHEAR STRENGTH REQUIRED: 26,000 PSI MIN.

SHEAR TEST RESULTS: 1. 33,435 PSI 2. 33,702 PSI
3. 32,358 PSI 4. 32,888 PSI 5. 32,831 PSI

DIMENSIONAL INSPECTION

SAMPLE SIZE: 32

RESULTS: ACCEPTABLE

GRAIN: 7

DRIVEABILITY: ACCEPTABLE

FINISH: MIL-C-5541, CLASS 1A, GOLD

COMMENTS:

The undersigned hereby certifies that the items supplied herewith were manufactured and inspected in accordance with all applicable government and/or customer specifications. All supporting documentation is on file, and available for review upon request.

The aforementioned items were manufactured by Allfast Fastening Systems, Inc at 15200 Don Julian Road, City of Industry, California 91745.



QUALITY ASSURANCE REPRESENTATIVE

MANUFACTURERS OF AIRCRAFT AND COMMERCIAL FASTENERS

1941

1941

1941

1941

1941

1941

1941

1941

1941

1941

1941

1941

1941

1941

1941

1941

1941

1941

732

AF 92

NICHOLS WIRE, INCORPORATED

1547 Helton Drive - Florence, AL 35630

SHIP TO:
ALLFAST FASTENING SYS. INC
15700 DON JULIAN RD.
P.O. BOX 3166
CITY OF INDUSTRY, CA 91745

SOLD TO:
ALLFAST FASTENING SYS.INC
15200 E. DON JULIAN RD.
P.O. BOX 3166
CITY OF INDUSTRY, CA 91745

Shannon King

AUTHORIZED SIGNATURE
QUALITY CONTROL MANAGER

We hereby certify that the material covered by this report has been inspected in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown on this sheet.

			ULTIMATE		YIELD		SHEAR		% ELONGATION
LOT NUMBER	# OF TESTS		STRENGTH K.S.I.		STRENGTH K.S.I.		STRENGTH K.S.I.		
			MIN	MAX	MIN	MAX	MIN	MAX	
K-832347	11		32.8	34.9	0.0	0.0			0.00

COMMENTS

GRAIN SIZE .6 OR FINER

M151-4 F.E. 1

QQA-430

MILL SOURCE KAISER

**ALLOY VERIFICATION
HAS BEEN PERFORMED**



GRSZ: 7.0

CHEM COM P	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		OTHERS	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
	2117	0.0000	0.8000	0.0000	0.7000	2.2000	3.0000	0.0000	0.2000	0.2000	0.5000	0.0000	0.1000	0.0500	0.1500
		NICKEL		ZINC		TITANIUM									
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
0.0000	0.0000	0.0000	0.2500	0.0000	0.0000										
ALUMINUM REMAINDER															

10 3 1 15

1 5 1 15

1 5 1 15

1 5 1 15

1 5 1 15

1 5 1 15

1 5 1 15

1 5 1 15

1 5 1 15

S944003

KAISER ALUMINUM
& CHEMICAL CORPORATION

CERTIFIED TEST REPORT

1459 HEBRON ROAD HEATH, OH 43056

CLEDENIN BROS INC KA182
4309 ERDMAN AVESHIP
TONICHOLS WIRE CO.
1547 NELTON AVE

FLORENCE

AL 35630

SOLD
TO

BALTIMORE

MD 21213

CLEDENIN 6796 01 8000 C I

MADE IN USA

CUSTOMER PURCHASE ORDER NO. & ITEM				KAISER ORDER NO.	
2972-NICHOLS				236432976	
ALLOY	CLAD	TEMPER	GAUGE	WIDTH	LENGTH
2117		0	.375	00.0000	000.000
ITEM ORDERED					
ALY-JUMBO					
CUSTOMER SPECIFICATION					
PART NUMBER		B/L NUMBER		DATE SHIPPED	
7LR375		6796		04/15/03	
WEIGHT SHIPPED	NO. OF PIECES		GOVT. CONTROL NO.		
40, 0	176				

CERTIFICATION

KAISER ALUMINUM & CHEMICAL CORPORATION (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER HAS BEEN INSPECTED AND TESTED AND FOUND IN CONFORMANCE WITH THE APPLICABLE SPECIFICATIONS FORMING A PART OF THE DESCRIPTION SET FORTH IN KAISER'S SALES ORDER ACKNOWLEDGMENT FORM. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS & CONDITIONS OF SALE.

David J. Shoemaker
David J. Shoemaker
Technical Manager

LOT NUMBER	OP TS	WGU							
590840	MIN	21.4							
	MAX	21.4							
14-11F	Cu	Fe	Si	Mn	Mg	Zn	Cr		
	2.8	.44	.41	.16	.37	.15	.07		
832347	MIN	21.4							
	MAX	22.9							
14-11F	Cu	Fe	Si	Mn	Mg	Zn	Cr		
	2.8	.44	.41	.16	.37	.15	.07		

CHEMICAL COMPOSITION (WT.%)

	Cu	Fe	Si	Mn	Mg	Zn	Cr	Others Each	Others Total		
MIN	2.2				0.20						
MAX	3.03	0.7	0.8	0.20	0.50	0.25	0.10	0.05	0.15		

ALUMINUM REMAINDER

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7111
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

MIAMI, FL 33172

Material Certification

purchase order referred to below have been visually inspected
have been measured by us, and based on the aforesaid, as well
us by the manufacturers of the items subject of such purchase
such items are in conformity with all current governmental
specifications, drawings, and conform to the purchase
are in new condition and have not been obtained from any
source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO26710

REF#	LOT-NUMBER	MANUFACTURER	CCODE MFI	DATE	EXP DATE
	70671	MAC FASTENERS	0RPT4		


Jason Lewis
Vice President of Quality

12/04/14



Shipped From: 10000 NW 15 TERRACE

The items set forth on the
and the dimensions thereof
as the representation made
order, we hereby certify that
and manufacturer's require
order requirements. Said item
U.S. Government or Military s

LNE#	QUANTITY	U/M	PART-NUMBER	CUST
3	200	EA	MS27039-1-05	

Inv # 12/04/14

MAC FASTENERS, INC.
1110 ENTERPRISE
OTTAWA, KANSAS 66067

**CERTIFICATE OF CONFORMANCE
AND
MANUFACTURER'S AFFIDAVIT**

CUSTOMER: B/E AEROSPACE

PO: 0TEW88

PART NUMBER: MS27039-1-05

REV: 4

LOT NUMBER: 70671

MANUFACTURED QUANTITY: 120,000

MILL HEAT NUMBER: 8172051

COUNTRY OF ORIGIN: UNITED STATES OF AMERICA

DFARS 252.225.7009 Compliant

MERCURY FREE CERTIFICATION

MacFasteners certifies that the parts referenced in the above lot number do not contain Mercury or Mercury compounds, and were manufactured in a Mercury free environment.

We certify that the parts furnished against the above referenced purchase order were manufactured by MAC FASTENERS within the United States, and were processed in accordance with all applicable drawings and specifications. Objective evidence of compliance is on file, subject to examination upon request.

Mac Fasteners is an AS9100C Registered Company - SAI GLOBAL - 0058029
Mac Fasteners is a DISC QSLM approved Manufacturer - CAGE Code 0RFT4
Mac Fasteners is an Airbus approved Supplier - 203399

DATE: 09/21/14


QUALITY ASSURANCE REPRESENTATIVE

MAC FASTENERS, INC.
1110 EAST ENTERPRISE
OTTAWA, KS 66067

CHEMICAL & PHYSICAL TEST REPORT

CUSTOMER B/E AEROSPACE	PO NUMBER 0TEW88	MFG QUANTITY 120,000	DATE 09/21/14
PART NUMBER MS27039-1-05	REV 4	LOT NO 70671	PROCUREMENT SPEC NASM7839

MATERIAL TYPE 8740				MATERIAL SPECIFICATION MIL-S-6049/AMS6322				MILL HEAT NUMBER 8172051			SUPPLIER JOHNSTOWN		
C .40	Si .25	Mn .86	P .010	S .011	Cu .09	Ni .44	Cr .49	Mo .22	V .003	B	Fe	Al .026	Ti
	Co	N .0043	Bi	Pb	Mg	Zn		Nb	Sn 006			Other	

MECHANICAL TEST RESULTS - TESTING PER NASM1312

ULTIMATE TENSILE STRENGTH POUNDS
TOO SHORT TO TEST PER NASM1312-8
MIN. REQ. _____

DOUBLE SHEAR STRENGTH POUNDS / PSI
TOO SHORT TO TEST PER NASM1312-13
MIN. REQ. _____

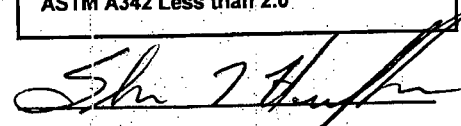
HARDNESS	
ROCKWELL "C" SCALE	
REQ.	26 - 32 HRC
SAMPLE SIZE	13
ACTUAL RESULTS 26 - 31 HRC	

NDT/ ADDITIONAL TESTS	
Magnetic Particle Inspection per ASTM E1444	<input type="checkbox"/>
Liquid Penetrant Inspection per ASTM E1417	<input type="checkbox"/>
Head Marking	<input checked="" type="checkbox"/>
Fatigue Strength	<input type="checkbox"/>
Stress Durability Test NASM1312/5	<input type="checkbox"/>
Stress Rupture Test	<input type="checkbox"/>
Magnetic Permeability ASTM A342 Less than 2.0	<input type="checkbox"/>

METALLURGICAL EXAMINATION			
Discontinuities	<input checked="" type="checkbox"/>	Carb/Decarb	<input checked="" type="checkbox"/>
Grain Flow	<input checked="" type="checkbox"/>	Microstructure	<input checked="" type="checkbox"/>
Grain Size	<input checked="" type="checkbox"/>	Appearance	<input checked="" type="checkbox"/>
Thread Inspection FED-STD-H28/20 - ASME B1.3	System 21 <input type="checkbox"/>	System 22 <input checked="" type="checkbox"/>	System 23 <input type="checkbox"/>

TEST CERTIFICATION

WE CERTIFY THAT THE PART NUMBER, LOT NUMBER, AND SAMPLES REFERENCED ABOVE HAVE BEEN TESTED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATION FOR THE TESTS REPORTED HEREIN. THIS CERTIFICATION SHALL NOT BE RE-PRODUCED, EXCEPT IN FULL, WITHOUT THE APPROVAL OF MAC FASTENERS, INC.


Quality Assurance Representative

MAC FASTENERS, INC.
1110 ENTERPRISE
OTTAWA, KANSAS 66067

HEAT TREAT CERTIFICATION

CUSTOMER: B/E AEROSPACE

DATE: 09/21/14

PO NUMBER: OTEW88

MANUFACTURED QUANTITY: 120,000

PROCESSOR:

PAULO PRODUCTS KCMO - NADCAP ID 4679

LOT NUMBER: 70671

MATERIAL: TYPE 8740

PART NUMBER: MS27039-1-05

REVISION: 4

REQUIRED HARDNESS: 26 - 32 HRC

SAMPLE SIZE: 13

HARDNESS: 26 - 31 HRC

HEAT TREAT SPECIFICATION AS APPLICABLE: MIL-H-6875/AMS-H-6875/AMS2759/AMS5853/PS-1001

Notes:

The fasteners referenced in this report have been processed, inspected and certified by the Heat Treat Contractor in accordance with all applicable drawings and specifications. Heat Treatment has been verified in accordance with procurement specification and part drawing by metallurgical and mechanical testing as applicable. Evidence of compliance as well as certification from the Heat Treat Contractor is on file and subject to examination upon request.


QUALITY ASSURANCE REPRESENTATIVE

MacFasteners, Inc. is an AS9100C Registered Company - SAI GLOBAL - 0058029

COMMERCIAL PLATING COMPANY

TC-4500 XRF ST

Mon May 18 03:08:40 1998

COMMERCIAL PLATING CERTIFICATION AND TEST RESULTS

This is to certify that the order described below was plated to comply with the agreed upon requirements of the requested specification.

DATE: 09/18/14

CUSTOMER: MAC FASTENERS

PART NUMBER: MS27039-1-05

DESCRIPTION: SCREW

ORDER NUMBER: 103986

LOT NUMBER: 70671

TOTAL WEIGHT: 555 LBS

PIECES PLATE TO GAUGE: Y

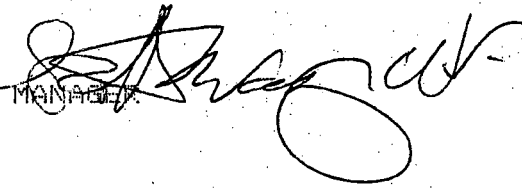
SPECIFICATION: SAE AMS QQ-P-416C, TYPE II, CLASS 2

REQUIREMENTS: 0.0003 CAD. MIN. AND YELLOW CHROMATE

AUTHORIZED SIGNATURE:

TITLE: QUALITY CONTROL MANAGER

SCOTT WAGNER





Johnstown Wire Technologies

124 Laurel Ave,
Johnstown, PA 15906
Phone: 814-532-5680
Fax: 814-532-5684

WORK ORDER
165469

TEST REPORT
LOT NUMBER
K-8172051
SALES ORDER / RLS
007117 / 6

SOLD TO

Mac Fasteners, Inc.
C/O TD Logistics Inc.
14505 W 100th Street
Lenexa, KS 66215
USA



CUSTOMER P.O. 50516	CUSTOMER PART 8740-.167	QUANTITY 5,666 LBS	COILS 3	LADING NO 00124730	SHIPMENT DATE 06/03/2014
SPECIFICATION MacFast-87167 AMS2301; AMS6322; AMS-S-6049A; MIL-S-6049A 8740 DFARS TS 95000 PSI Max Defense Federal Acquisition Regulation Supplement Silicon Killed Fine Grain Aircraft Quality/Cold Heading Quality Drawn From Annealed Rod Spheroidize Annealed In Process Heavy Phos & Light Lube Ctd Size: .167 +.0005 -.0005					
CERTIFICATION REQUIREMENTS					
Chemical					
C .40	Mn .86	P .010	S .011	Si .25	Al .026
Ni .44	Cr .49	Mo .22	Cu .09	V .003	
Cb .001	Ti ???????	N .0043	Sn .006		
Physical					
AMS 2301 0000	J1 58	J10 42	J11 39	J12 38	J2 57
					J3 56
					J5 55
					J4 56
					J6 54
					J7 51
					J8 48
					J9 45
MacroClean E-381 111					
Mechanical					
TEST	UNITS	HIGH	LOW	AVERAGE	
Tensile Str	Lbs/SqIn	83000	83000	83000	
RA Per Cent	Percent	72.9	69.7	71.3	
Decarb FFD	Inches	.000	.000	.000	
Surface def. depth	Inches	.000	.000	.000	
Rod / Melt Source					
Rod Source Republic	Melt Source Republic	Country of Origin USA	Nafta Yes		
End of Certification					

I certify that the results are a true and correct copy of the records prepared and maintained by JOHNSTOWN WIRE TECHNOLOGIES in compliance with the requirements of the cited specification. Chemistry is as reported by the rod / bar supplier and is not in JWT A2LA accreditation. This test report cannot be reproduced or distributed except in full without the written permission of JOHNSTOWN WIRE TECHNOLOGIES. The test results certified herein relate only to the items tested.

Daniel J. Malik
Daniel J. Malik Director of Quality Assurance

S-5

12

13

14

15

16

17

18

19

20

21

22

23

24



1901 EAST 28TH ST.
PHOENIX 330-438-5500

LOHAIN, OH 44055
FAX: 330-438-5505

CERTIFICATE OF TESTS

REPUBLIC STEEL

6/25/2013
11:08:00 AM
PAGE 1 OF 2

PURCHASE ORD: 84084
PART NUMBER: FXT40AA-.375
ORDER NUMBER: 1547434 - 01
HEAT: 8172051

PURCHASE ORDER DATE: 3/4/2013
ACCOUNT NUMBER: 5672-1921-01
SCHEDULE: 6101-93
REVISION: 1

CHARGE ADDRESS

JOHNSTOWN WIRE TECHNOLOGIES
124 LAUREL AVE
JOHNSTOWN, PA 15906

SHIP TO

JOHNSTOWN WIRE TECHNOLOGIES
EDWARD ZAPOLA
C/O C & BL RAILROAD
TRACK 629
JOHNSTOWN, PA 15901

MATERIAL DESCRIPTION

HOT ROLLED STEEL COILS ALLOY AMS 2301K JOHNSTOWN WIRE SPEC RW-100 REVISION DTD 04/21/04 EXC PARA
10.3 AMS 6322N EXC HARD JOHNSTOWN WIRE SPEC RW-005 REVISION DTD 12/31/00 EXC SURFACE DEFECTS
JOHNSTOWN WIRE SPEC PART NO. FXT40AA REVISION DTD 12/31/00 MIL S 6049A & AMD 1 COND B-1 EXC MARK &
UT-WAIVED EF-AISI-8740-H FINE GRAIN VACUUM DEGASSED AIRCRAFT QUALITY FIXED PRACTICE QUALITY
RESTRICTED CHEMISTRY RESTRICTED MAX INCIDENTAL ELEMENTS
SIZE: RDS .3750 DIAM X COIL
RDS 9.5250MM DIAM X COIL

LADLE CHEMISTRY

C	MN	P	S	SI	CU	NI	CR
0.01	0.86	0.005	0.011	0.25	0.09	0.44	0.49
V	MO	SE	AL	B	CB	N	
0.003	0.22	0.006	0.026	0.0001	0.001	0.0043	

CALCULATED TESTS

REDUCTION RATIO 1,177.6 TO 1

AUSTENITIC GRAIN SIZE 5 OR FINEER BASED ON A TOTAL ALUMINUM CONTENT EQUAL TO OR GREATER THAN .020% PER ASTM A29.

SEMI - FINISHED RESULTS

JOMINY HARDNESS TEST SAE J406/ASTM A255
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32
58 57 56 55 54 51 48 45 42 39 38 36 34 34 33 32 31 30 29 29 29 28 28

MACRO ETCH TEST ASTM E381/MIL STD 430
ETCHANT: HCL TEMPERATURE: 170
S R C
AVG 1 1 1

MAGNETIC PARTICLE TEST AMS 2301 AMS2304 AMS2300
IND AVG IND AVG
FREQ FREQ SEV SEV
PCE 03 0 0 0 0

FINISHED SIZE RESULTS

DECARBURIZATION TEST SAE 419/ASTM E1077/JIS G0558
ETCHANT - NITAL MAGNIFICATION = 100X

	SPIKE	COMPACTE	TOTAL
	INCHES	INCHES	DEPTH
			INCHES
PCE 579	0.002	0	0.001

C. KRUTH
DIRECTOR QUALITY ASSURANCE

BY DEBORAH STOKES

M T Kruth

1807 EAST 28TH ST.
PHONE: 330-438-5580LORAIN, OH 44051
FAX: 330-438-5495

CERTIFICATE OF TESTS

REPUBLIC STEEL

6/25/2013
11:08:00 AM
PAGE 2 OF 2PURCHASE ORD: 84084
PART NUMBER: FXT40AA-.375
ORDER NUMBER: 1547434 - 01
HEAT: 8172051PURCHASE ORDER DATE: 3/4/2013
ACCOUNT NUMBER: 5672-1921-01
SCHEDULE: 6101-93
REVISION: 1

CAPABLE OF SEAM DEPTH 1% MAX DIAMETER NOT LESS THAN .005 MAX

NOTES

CHEMICAL ANALYSIS CONFORMS TO APPLICABLE SPECS: ASTM E415, LBL10129, LBL10130, ASTM E1019, LBL10158, LBL10114, AND ASTM E1085, LBL10184, LBL10188.

REPUBLIC STEEL HEREBY CERTIFIES THAT THE MATERIAL LISTED HEREIN HAS BEEN INSPECTED AND TESTED IN

NOTES (CONTINUED)

ACCORDANCE WITH THE METHODS PRESCRIBED IN THE GOVERNING SPECIFICATIONS AND BASED UPON THE RESULTS OF SUCH INSPECTION AND TESTING HAS BEEN APPROVED FOR CONFORMANCE TO THE SPECIFICATIONS.

CERTIFICATE OF TESTS SHALL NOT BE REPRODUCED EXCEPT IN FULL.

ALL TESTING HAS BEEN PERFORMED USING THE CURRENT REVISION OF THE TESTING SPECIFICATIONS.

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FED STATUTES TITLE 18 CHAPTER 47.

THE MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURE DURING PROCESSING OR WHILE IN OUR POSSESSION.

NO WELD OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL.

THE RESULTS REPORTED RELATE ONLY TO THE ITEMS TESTED.

SOURCE INFORMATION

MELT SOURCE: CANTON CAST ROLL MELT COUNTRY: U.S.A HOT ROLL SOURCE: LORAIN 9/10, U.S.A
MELT METHOD: EF BLOOM RED. RATIO: 1177.6

END OF DATA

CC

END OF DATA

WITH SHIPMENT 1 COPY PRINTED AT SHIPPING AREA
FAX SHIP TO 1 COPY ATTENTION EDWARD ZAPOLA
FILE 1 COPY

1-814-532-5684

G. KRUTH
DIRECTOR QUALITY ASSURANCE

BY DEBORAH STOKES



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO26710

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
1	100	EA	80-004-2-8		51966	YOUNG ENGINEERS	56958		


Jason Lewis
Vice President of Quality

12/04/14



The YOUNG ENGINEERS, Inc.

engineering • manufacturing • aerospace fasteners

25841 Commercentre Drive, Lake Forest, California 92630 USA

Mail Add: PO Box 278, Lake Forest, California 92609-0278 USA

(949) 581-9411 Fax (949) 583-7662

email: sales@youngengineers.com

CERTIFICATE OF CONFORMANCE

Packing Slip 51490

Customer Purchase Order 0SWY32

Sales Order 30250

Ship Date 2/26/2014

Page Number 1

Bill To

2030

B/E AEROSPACE INC

COMSUMABLES MANAGEMENT

PO BOX 025263

MIAMI, FL 33102-5263

USA

Ship To

B/E AEROSPACE INC

9835 NW 14 STREET

MIAMI, FL 33172

USA

Line / Cust L	Item ID / Alt Item ID	Description	Lot Number	Lot Trans Qty
★ 1	TYE3002-3-8	10-32 Blind Thrd, Snap In, Alloy Stl, .010-.019 Skin Thickness, Self-Lock, .500OD X .455OAL	51966	2,500
1	80-004-2-8			
	Rev. V			
2		Test Report		
2				

Special In

FedEx Acct 0331-0149-0

The use of Class 1 Ozone depleting substances; nor the use of Mercury, Mercury compounds or Mercury Bearing Instruments, and/or equipment, have not been used in the design, testing, manufacture, assembly, integration, handling, packaging of this product.



The parts contained in this shipment have been manufactured and inspected in accordance with TSO-C148. The conditions and tests required for TSO approval of this article are minimum performance standards. Aircraft fasteners approved under this TSO are not necessarily interchangeable with other aircraft fasteners approved under this TSO. Fasteners of similar dimensional properties may have widely varying performance and metallurgical properties. Substitution of parts may only be done if acceptable to or approved by the Administrator.

The items(s) which are identified within this certification have been reviewed and verified for compliance to those requirements specified within DFARS 252.225.7014 ALT 1 and DFARS 252.225.7009

ITAR	ECCN Code	HTS (Schedule B) Code
N/A	(NLR) EAR 99	8803.30.00

CERTIFICATE OF CONFORMANCE

We Certify that the furnished parts have been manufactured, inspected, tested, and unless otherwise stated above, conform with applicable specifications, drawings and purchase order requirements. Inspection, test data and/or material certifications are on file and available for examination at our facility. We further certify that these articles are of United States origin, manufactured by/for The Young Engineers, Inc.

Authorized Signature

By

Gretchen Delaney
Office Manager

FEB 26 2014



SDF-03-07

The YOUNG ENGINEERS, Inc.

Manufacturing Operations Sheet

Work Order ID 51966

Item ID TYE3002-3-8

Descrip 10-32 Blind Thrd, Snap In, Alloy Stl, .010-.019 Skin Thickness, Self-Lock, .500OD X .455OAL

Job Qty 9500 Lot No 1112-13

Lot Qty Date Printed 9/13/2013

Start Date 11/7/2013

Customer ID 2007

Cust PO No

Due Date 2/7/2014

Eng Planning By <u>RC</u> Date <u>9/16/13</u>		Manufacture Per Dwg No <u>TYE3002-13-8</u> Rev <u>D</u> Final Inspect Per Dwg No <u>TYE3002 Series</u> Rev <u>A</u> <input type="checkbox"/> Customer Release <input checked="" type="checkbox"/> TYE Catalog <input type="checkbox"/> Final Inspection Release <input type="checkbox"/> Assembly Release				<input type="checkbox"/> If this box is marked, these parts were manufactured by altering the base parts identified in the Material Planning Sheet accompanying this packet		
FC Planning By <u>ES</u> Date <u>9/13/13</u>		CNC Lathe Program No <u>0482-BY6</u> Cycle Time <u>55sec</u> Mach No <u>31-A</u> 1st Op <u>0482-BY6</u> 2nd Op <u>55sec</u>		Drill / Mill Program No <u>31-A</u> Cycle Time <u>55sec</u> Mach No <u>31-A</u> 1st Op <u>0482-BY6</u> 2nd Op <u>55sec</u>		Mfg Approval By <u>W</u> Date <u>1/7/14</u>		

Seq ID	Operator Initial	Work Center	Operation Description	Inspection			Quantity	Ac#	Re#	QA Stamp	Date	NCR #
				1st Art	Rec Final	NA						
10		WOP	Standard Work Order Preparation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						
20	<u>AG</u>	M	M1 Raw Material Preparation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						
30	<u>HL</u>	CN	CNI CNC Lathe 1st Op Machining Memo Use 'BEFORE PLATE' Gage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>9855</u>	<u>1</u>	<u>0</u>		<u>JAN 0 8 2014</u>	
40	<u>LY</u>	M	M2 Wash	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>9858</u>					
50	<u>TD</u>	C	(3MC) C1 Hand Coin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>9802</u>	<u>1</u>	<u>0</u>		<u>2/3/14</u>	
55	<u>PT/GC</u>	D	D71 CNC Potting Holes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>9800</u>	<u>1</u>	<u>0</u>		<u>2/6/14</u>	
60	<u>LY</u>	M	M2 Wash	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>9800</u>					
70	<u>BL</u>	P	P8C Flats (Hand Load Feed)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>9770</u>	<u>1</u>	<u>0</u>		<u>2/19/14</u>	
80	<u>LY</u>	M	M3 Tumble	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>9689</u>					
90	<u>LY</u>	M	M2 Wash	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>9689</u>					
100	<u>TE</u>	RMF	* Cad Plate Per AMS-QQ-P-416, Type II, Class 2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>9689</u>	<u>32</u>	<u>0</u>		<u>FEB 25 2014</u>	
110	<u>TE</u>	QA	Quality Assurance Final	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>9689</u>	<u>32</u>	<u>0</u>		<u>FEB 25 2014</u>	

Inspection Level: ☒ S-3 AQL 1.0 ☐ AQL

3 Containers(s) Type: ☒ Bucket ☐ Weight (lbs) 81

QA Planning By TE Date SEP 10 2013

Count Factor 3.40/4

Comments: * MIN TIC 2/20/14 PUA

The YOUNG ENGINEERS, Inc.

These Test Reports Apply To:

Customer Name BEAumont

Customer P.O. No. 05W132

Part No. 0482-3-8

Rev No. 2500

Quantity 107986

TYE Invoice No. 14

Pages this report 14

Date 2-26-14

Signature [Signature] Office Manager

Rev I 03/02

FEB 26 2014

Work Order Package Review

TYE QA Inspector Stamp

Date: FEB 26 2014



The YOUNG ENGINEERS, Inc.

Manufacturing Operations Sheet

In Process Inspection Interval									
Unless otherwise indicated, all operations to be inspected at <u>4</u> hour intervals.									
Additional Inspection Interval Requirements									
Special Inspection Interval: Operation(s) _____									
Op No	Inspect Time	Type/Count	Total Pieces Accept/Reject	Sample Size	Sample Ac/Re		QA Stamp	Date	Notes
					Ac #	Re #			
30	1:00	P/B	1	1	1	0	(TIE M-15)	SEP 09 2013	(TIE M-15) 1/9/14
30	10:00	3C-A	400	8	8	0	(TIE M-15)	1/9/14	
30	14:00	3C-A	360	5	5	0	(TIE M-15)	1/9/14	
30	18:00	3C-A	150	5	5	0	(TIE M-15)	1/9/14	
30	22:00	3C-A	150	5	5	0	(TIE M-15)	1/9/14	
30	2:00	3CA	550	13	13	0	(TIE M-15)	1/10/14	
30	6:00	3CA	200	8	8	0	(TIE M-15)	1/10/14	
30	10:00	3CA	200	8	8	0	(TIE M-15)	1/10/14	
30	14:00	3CA	200	8	8	0	(TIE M-15)	1/10/14	
30	18:00	3CA	300	8	8	0	(TIE M-15)	1/10/14	
30	22:00	3CA	300	8	8	0	(TIE M-15)	1/10/14	
30	2:00	3CA	0	0	0	0	(TIE M-15)	1/13/14	NO OPERATED
30	10:00	3CA	150	8	8	0	(TIE M-15)	1/13/14	
30	14:00	3CA	150	8	8	0	(TIE M-15)	1/13/14	
30	18:00	3CA	400	8	8	0	(TIE M-15)	1/13/14	
30	22:00	3CA	0	0	0	0	(TIE M-15)	1/13/14	mach down
30	6:00	3C-A	400	8	8	0	(TIE M-15)	1/14/14	
30	10:00	3C-A	370	8	8	0	(TIE M-15)	1/14/14	
30	14:00	3C-A	350	8	8	0	(TIE M-15)	1/14/14	
30	18:00	3CA	250	8	8	0	(TIE M-15)	1/14/14	
30	22:00	3CA	250	8	8	0	(TIE M-15)	1/14/14	
30	6:00	3C-A	570	8	8	0	(TIE M-15)	1/15/14	
30	10:00	3C-A	230	8	8	0	(TIE M-15)	1/15/14	

In-Process Locking Torque Register (Bolt Number NAS 1096-3-7 Bolt PO Number 136540 Wrench Tool No TC27.1)

6.0-6.0
6.0-6.0
5.5-5.5
5.5-3.5
6.0-4.0
6.0-4.0
6.0-4.0

Comments and/or Special Instructions



The YOUNG ENGINEERS, Inc.

Manufacturing Operations Sheet

Job No 51966 Part No TYE 3002-3-8

In Process Inspection Interval

Unless otherwise indicated, all operations to be inspected at 4 hour intervals.

QA Apvl 7 Date 1/16/14

Additional Inspection Interval Requirements

Special Inspection Interval: Operation(s) _____ Interval _____ QA Apvl _____ Date _____

Op No	Inspect Time	Type/Count	Total Pieces Accept/Reject	Sample Size	Sample Ac/Re		QA Stamp	Date	Notes
					Ac #	Re #			
30	6:00	3C-A	400	8	8	0	TYE	1/16/14	
30	10:00	10	370	20	20	0	TYE	1/16/14	
30	14:00	3EA	300	5	5	0	TYE	1/16/14	
30	18:00	3C-A	200	8	8	0	TYE	1/16/14	
30	22:00	3C-A	200	8	8	0	TYE	1/16/14	
30	6:00	3C-A	500	8	8	0	TYE	1/17/14	
30	10:00	3C-A	500	8	8	0	TYE	1/17/14	
30	14:00	3C-A	400	8	8	0	TYE	1/17/14	
30	18:00	3C-A	215	8	8	0	TYE	1/17/14	
30	18:15	L/P	All	1	1	0	TYE	1/17/14	
50	13:30	F/A	1	1	1	0	TYE	2/3/14	7.0-5.0
50	6:00	3M	8,000	20	20	0	TYE	2/4/14	5.0-4.0/5.0-4.0
50	7:00	L/P	All	1	1	0	TYE	2/4/14	6.0-5.0/5.0-4.0
50	12:00	F/A	1	1	1	0	TYE	2/6/14	6.0-5.0
50	7:00	3M	463	8	8	0	TYE	2/7/14	
50	10:00	3M	900	13	13	0	TYE	2/7/14	
55	14:00	U	500	8	8	0	TYE M-14	2/7/14	
55	10:00	U	2200	13	13	0	TYE M-14	2/8/14	
55	18:00	3M	800	13	13	0	TYE M-13	2-11-14	
55	22:00	3M	800	13	13	0	TYE M-13	2-11-14	
55	18:00	3M	3960	20	20	0	TYE M-13	2-12-14	
55	19:00	L/P	All	1	1	0	TYE M-13	2-12-14	

In-Process Locking Torque Register (continued)

Comments and/or Special Instructions _____

1

2

3

4

5

6

7

8

9

10

11

12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



Unless otherwise indicated, all operations to be inspected at 7 hour intervals. In Process Inspection Interval

FEB
Date **9 2014**

Additional Inspection Interval Requirements

Special Inspection Interval: Operation(s)

Interval

QA Apv1

Date _____

In-Process Locking Torque Register (continued)

Comments and/or Special Instructions

The YOUNG ENGINEERS, Inc.

Material Planning Sheet

Work Order ID 51966

Parent Item ID TYE3002-3-8

Item Description 10-32 Blind Thrd, Snap In, Alloy Stl, .010- .019 Skin Thickness, Self-Lock, .500OD X .455OAL

Job Qty 9,500 Lot No Lot Qty Date Printed 1/7/2014 Due Date 2/7/2014

Engineering Approval
By UP Date 1/7/14

Component Item ID/ Item Name	Mfg / Purch	Primary Location	Last Location	Unit of Measure	Qty on Hand	Qty To Pick	Qty Issued	QA Stamp	Date Issued
---------------------------------	-------------	---------------------	------------------	--------------------	----------------	----------------	---------------	-------------	----------------

1/2 4130 Cond F Purchased
Steel Bar(s) per AMS-S-8758; (125 - 145 UTS)

Bar 90 48

48

67 JAN 07 2014

Location	Lot / Heat	PO No	Loc Qty	Loc Code
STOCK BAR			90.0	
	A1332U	140935	90.0	

4871 1/17/14 TGA

The YOUNG ENGINEERS, Inc.

First Article Inspection Report

Job No 51966 Part No TYE3002-3-8 Date 1/9/14 Page 2 of 2
 Document(s) Used: ☒ TYE Production Release ☐ Other _____
 Document No TYE3002-(38)-8 Rev D
 Job Qty 9,500 Qty Submitted 1 Qty Accept 1 Qty Reject 0
 Name of Inspector V. RUIZ NCR No¹ _____

Visual Inspection: ☒ Acceptable ☐ Not Acceptable¹

OP No.	Item No	Drawing Dimension (.XXX ± .005" Unless Indicated)	Actual Dimensions (low/high)	Ac	Re ¹	Instrument Type	Serial No
30	1	φ.446	.447	TYE 3		CAL	T621
	2	φ.250 ± .002	.2493	TYE 3		BLADE MIC	T099
	3	.050	.050	TYE 4		CAL	T621
	4	2X R.015 ± .010	.009 - .011	TYE 4		COMP	T588
	5	.455	.456	TYE 3		CAL	T621
	6	.015 ± .002	.0160	TYE 4		COMP	T588
	7	.120	.121	TYE 4		COMP	T588
	8	16-20 TPI X 25 ± 5°	20 TPI X 30°	TYE 4		COMP	T588
	9	15° BK	15° BK	TYE 4		COMP	T588
	10	φ.470 ± .002	.4695	TYE 4		BLADE MIC	T099
	11	60° ± 30°	60°	TYE 4		COMP	T588
	12	.021 ± .002	.0211	TYE 3		COMP	T588
	13	.330 MFT	.326 MFT	TYE 4		T-GAGE COMP	T561
	14	.030 MIN	.040 MIN	TYE 4		DROP IND	T592
	15	φ.480 ± .002 AK	.4816 AK	TYE 4		OD MIC	T622
	16	φ.500	.501	TYE 4		CAL	T621
	17	100-32 UNJF 3B OK	PERT-GAGE	TYE 3		T-GAGE	T561
	18	MINOR φ.1605, 1615	116160, 167 NO	TYE 2		PINS	T519
	19	PD .1705-.1730	.1719	TYE 4		PD / ITC	344 / T581
	20	FD .1705 MIN	.1724	TYE 4		FD / MASTER SEE / RING	552 / T544
	21	φ.205 X 60° ± 30°	.206 X 60°	TYE 4		COMP PROTRACTOR	T588
	22	125	125	TYE 3		SR	T254
30	23	↑ ↑ .005 MAX	.005 MAX	TYE 3		DROP IND	T592
50	24	.16 ± .010	.162	TYE 4		Comp	T521 2/3/14
55	25	.246	.245	TYE 3		CAL	T428A 2/6/14

Remarks (Refer to Item No) MEMOZ

¹ See Nonconformance Report for disposition, if applicable.

The YOUNG ENGINEERS, Inc.

First Article Inspection Report

Job No 51966 Part No TYE 3002-3-8 Date 2/6/14 Page of 10 of 2

Document(s) Used: ☒ TYE Production Release ☐ Other

Document No TYE 3002 - (08) - 8

Rev D

Job Qty 9,500

Qty Submitted

Qty Accept

Qty Reject 2

Name of Inspector R. TORRES

NCR No¹

Visual Inspection: ☒ Acceptable ☐ Not Acceptable¹

[illegible]

Remarks (Refer to Item No)

¹ See Nonconformance Report for disposition, if applicable.

The YOUNG ENGINEERS, Inc.
Final Inspection Report

Job No 51966 Part No 77E3002-3-B Date FEB 25 2014
Document(s) Used: HTYE Catalog Print - Final Page 1 of 1

Document(s) Used: ☒ TYE Catalog Print ☐ Final Inspection Release ☐ Customer Release ☐ Other
Document No. 77E3007 SER EP

Document No. T7E3002 SERIES ☐ Final Inspection Release ☐ Customer Release ☐ Other
Single Sampling Inspection Per ANSI/ASQC Z1.4-1988 Rev A

Single Sampling Inspection Per ANSI/ASQC Z1.4 - 1993 [Level S-3, AQL 1.0]: ☒ Yes ☐ No [Level AQL]
Final Qty 9684 Sample Size 32

Final Qty 9684 Sample Size 32 Qty Accept 32 Qty Reject 0

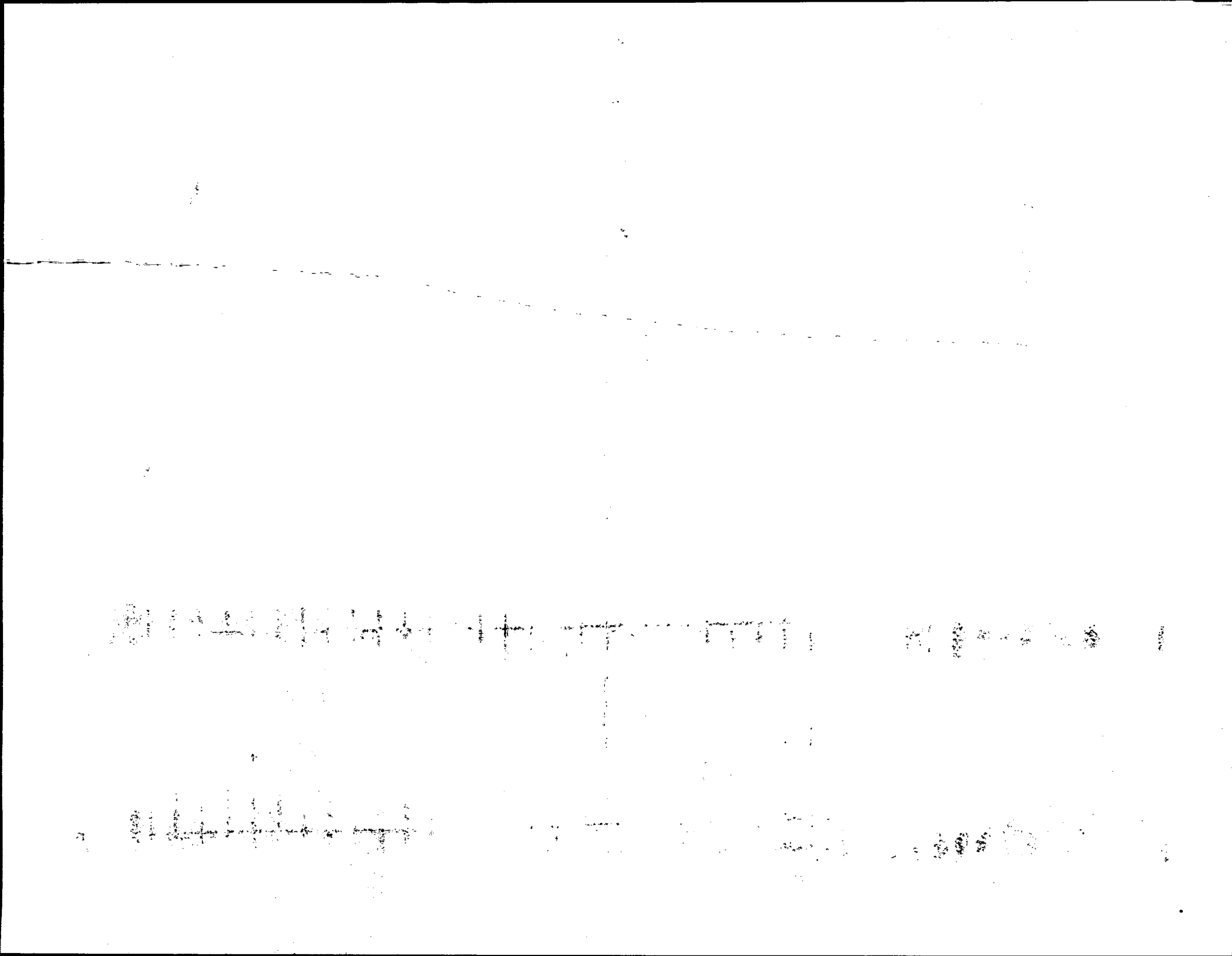
Name of Inspector P. R. Nguyen Sample Size 32 Qty Accept 32 Qty Reject 0
Visual Inspection _____ NCR No¹ _____

Visual Inspection: ☒ Acceptable ☐ Not Acceptable¹

[illegible]

Remarks (Refer to Item No)






See Nonconformance Report for disposition, if applicable



The YOUNG ENGINEERS, Inc.

Final Inspection Torque Test Record

WC No 51966 Part No TYE 3002-3-B Date FEB 25 2010 Page 1 of 1
 Thread Locking Values Per: ☒ NASM-25027 ☐ TYE Specification ☐ Other _____
 Test Method/Sample Size Per: ☒ NASM-25027 ☐ TYE Specification ☐ Other _____
 Acceptable Limits: Maximum Locking Value [In-lb] 18.0 Minimum Breakaway Value [In-lb] 2.0
 Lot Qty 9684 Sample Size 5 Qty Accept 5 Qty Reject 2
 Bolt Part No NAS 1096-3-7 Bolt Lot No 136540 Instrument Serial No 7271
 Name of Inspector T. Nguyen NCR No¹ _____

Sample No	Max (1)	Break (1)	Max (7)	Break (7)	Max (15)	Break (15)	Ac	Re ¹
1	8	7	6	6	5	5		
2	8	7	5	5	5	5		
3	8	7	6	5	5	5		
4	9	8	6	6	6	5		
5	7	6	5	4	4	4		
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

¹ See Nonconformance Report for disposition if applicable.

* Identifies Potting hole Side (On Double Coined Parts)

3C-A 35 Sec

The YOUNG ENGINEERS, Inc.
Manufacturing Process Count Card Form

Work Order ID <u>51966</u>							
Operator Name	Pre-Process Count	Seq ID	Standard Process ID	Process Quantity	Operator Initials	Tool Cage Approval	Parts Lost*
Alex	0	20	M1	9500	A.G	AG	
HL	0	22	CN1	60	HL	HL	
VIETNG	e	"	"	750	m	m	
MG	0	30	CN1	450	MA	MA	
HL	0	32	CN1	270	HL	HL	
VIETNG	e	"	"	650	m	m	
MG	0	30	CN1	590	MA	MA	
VIETNG	e	"	"	600	m	m	
MG	0	30	CN1	360	MA	MA	
HL	0	32	CN1	110	HL	HL	
VIETNG	"	"	"	680	m	m	
MG	0	30	CN1	440	MA	MA	
HL	0	32	CN1	520	HL	HL	
VIETNG	e	"	"	220	m	m	
MG	0	30	CN1	430	MA	MA	
HL	0	32	CN1	360	HL	HL	
VIETNG	e	"	"	650	m	m	
MG	0	30	CN1	400	MA	MA	
HL	0	32	CN1	500	HL	HL	
VIETNG	"	"	"	750	m	m	
MG	0	30	CN1	725	MA	MA	
Seam	9858	40	M2	9858	LY	LY	
David	9858	50	C1	6000	TD	TD	40
Final Quantity					Total Parts Lost		

*Includes setup & test pieces, etc.

Comments _____

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

The YOUNG ENGINEERS, Inc.
Manufacturing Process Count Card Form

Work Order ID <u>51966</u>							
Operator Name	Pre-Process Count	Seq ID	Standard Process ID	Process Quantity	Operator Initials	Tool Cage Approval	Parts Lost*
David	9858	50	C1	3802	TD	TD	12
Phuoc	9802	55	D7I	943	PT	PT	
Hung	"	55	D7I	2410	HB	HB	
TS	"	11	D7I	2218	TH	TH	
GUAL	"	"	"	385	GR	GR	
Phuoc	"	"	"	402	PT	PT	
Phuoc	"	"	"	810	PT		
Thao	"	"	"	1602	HT	HT	
Phuoc	"	"	"	1030	PT	PT	2
Leung	9800	60	M2	9800	LY	LY	
Bao	9800	70	P24	9770	BP	BP	30
Leung	9689	80	M3	9689	LY	LY	21
Leung	9689	90	M2	9689	LY	LY	
Hein	9689	100	RMF	9689	TH		4
	9684	110	DAF	9684	TH		5
Final Quantity				9684	Total Parts Lost		153

*Includes setup & test pieces, etc.

Comments _____

Reid Metal Finishing
3110 West Harvard
Santa Ana, CA 92704
Phone: (714) 549-3771
Fax: (714) 549-3008

CERTIFICATION

P/L # 91927

02/24/2014

SOLD TO:

YOUNG ENGINEERS INC (THE)
PO BOX 278
LAKE FOREST, CA 92609-0278

SHIP TO:

YOUNG ENGINEERS INC (THE)
25841 COMMERCENTRE DRIVE
LAKE FOREST CA 92630

Ship: RMF Truck 1

Net 30 Days

UNITS SHIPPED	PART #	DESCRIPTION	PO #	RMF #	REF #
9,689 <i>qty.</i>	TYE3002-3-8		141782	94025	51966
0 <i>B/O</i>	81.00 <i>lbs.</i>				

WE HEREBY CERTIFY COMPLIANCE TO THE BELOW REFERENCED PROCESS SPECIFICATION(S)

Cadmium Plate Type II Class 2 Chromate
AMS-QQ-P-416

Color: GOLD

Rev: C

CI 2-ID Thread-Meets Thickness Requirements: .0003 Min .0008 Max.

Minimum Thickness Required

Sampling IAW ANSI / ASQC Z1.4 S-4-1993, Defects within a given batch or lot will be zero.



FEB 25 2014

Q.C. MANAGER:

Jules Ruiz



Nadcap



Processes are performed by RMF in accordance with the latest revisions or superseding specifications. This certification also meets the requirements for designs and drawings developed under older revisions and/or non-current specifications. An Electrode Technologies, Inc., Company.



A Titanium Industries Company

7373 Hunt Ave., Garden Grove, CA 92841
Phone: 714-895-7756 Fax: 714-891-5308

CERTIFICATE OF COMPLIANCE

SOLD TO:

THE YOUNG ENGINEERS

CUSTOMER P.O. #: 140935	ORDER #: 372789	DATE SHIPPED: 12/6/2013
ALLOY: 4130 HT	TEMPER/COND.: SEE MTR	PACKING LIST#: 372789
HEAT NO: A1332U	PRODUCER: KIVETON PARK-UK	CUSTOMER REFERENCE:

SPECIFICATION:

AMS-S-6758A
COND. F-4
125-145 UTS

ITEM DESCRIPTION:

.500" RD.

100 PC(S)

804 LB(S)

SEE ATTACHED TEST REPORT

WE HEREBY CERTIFY THAT, TO THE BEST OF OUR KNOWLEDGE, ITEM(S) SHIPPED ON THIS ORDER HAVE BEEN INSPECTED AND TESTED AND FOUND IN CONFORMANCE WITH THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. PRODUCT CONFORMS TO THE REQUIREMENTS OF THE PURCHASE ORDER.

Moises Aguilar
Authorized Certification Clerk

MT # 2893

TYE QA Inspector Stamp # 

Date: DEC 09 2013

The Young Engr's PO# 140935



REGISTERED OFFICE: KIVETON PARK, SHEFFIELD, S26 6NQ.

TEL: (01909) 770252.
EMAIL: sales@kivestee.co.uk

FAX: (01909) 772849/773889.
WEBSITE: www.kivestee.co.uk



CIVIL AVIATION AUTHORITY REF NO: A1963/48
RAYTHEON APPROVAL: RA156A/FAT3/7043

AIRBUS U.K. APPROVAL NO: A1978A/03033
AS/EAS100 REV B, BS EN ISO9001:2008 & AS9104: FMS6158

CERTIFICATE OF CONFORMITY/APPROVED CERTIFICATE:		NO:	L0548.
TO: BARMOND INTERNATIONAL, A DIVISION OF KIVETON PARK STEEL LIMITED, KIVETON PARK, SHEFFIELD, S26 6NQ.		DATE:	26 TH JUNE, 2013.
		ORDER NO:	3008 S.
		WORKS ORDER NO:	KP 26138/CB 50791
		SIZE:	.4970/.5000" DIAMETER.
		INCOMING R/NOTE NO:	00448268/1.

SPECIFICATION:

E4130 F4 AMS-S-8758A MIL-S-8758B AMS6346A AMS2301K AMS2304B AMS6370N (TO CHEMISTRY ONLY)
ASTM A331-95 ASTM A108 REV 7 AMS6348C AMS A322 REV 7 SAE AMS-STD-2154A 6S100
PIERCE SPAFFORD. MELTED AND PROCESSED IN THE U.K.

Test Ref.	Weight	0.2% Yield Proof stress T _{0.2} /N/mm ²	Max Stress T _{0.2} /N/mm ²	Elongation		Brinell		HV	HRC	Impact Ft Lbs Joules	R/Area
				0L	%	Test Specimen	Range on Bars				
S 7539	572	113	132	2.0	21.6						67.0
S 7540	580	113	133	2.0	21.0						68.0
S 7541	584	113	133	2.0	20.9						67.0
Specification:		(2%) 100KPSI	128/145KPSI	17% MIN							55% MIN

REMARKS:

HARDENED, TEMPERED AND COLD DRAWN.
RAW MATERIAL SOURCE: TATA STEEL U.K. LIMITED.
TATA STEEL INSPECTION CERTIFICATE ATTACHED.
DECARBURISATION: UP TO .012" PARTIAL.

MT # 2893

TYE QA Inspector Stamp # 32

HEAT TREATMENT DETAILS:

HARDENED
TEMPERED

SPECIFIED:
840/860°C
NONE SPECIFIED

ACTUAL:
860°C OQ.
800°C AC.

Date: DEC 09 2013

Cert No.	C.	SL	Mt.	P.	S.	Cr.	No.	NL	Cu.	Sn.	AL	V.	TL
A1332U	3050	.2700	.5300	.0110	.0013	.9800	.1800	.1300	.1600	.0100	.0240	.0020	.0003

CERTIFIED:

That the whole of the supplies detailed hereon have been inspected, tested and - unless otherwise stated above conform in all respects with the requirements of the contract/order. The quality control arrangements adopted in respect of these supplies have accorded with the conditions of our ISO 9001 registration.

Signed: _____

Date: 27/6/13

Approved signatory for and on behalf of K.P.S.

Inspectors Stamp
K.P. Asro.



CERTIFIED:

That unless stated above the whole of the above mentioned materials have been manufactured, tested and inspected in accordance with the terms of the contract/order applicable thereto and conform fully to the standards/specifications quoted hereon.

Signed: _____

Date: 27/6/13

Approved signatory for and on behalf of K.P.S.

MRS. J. CARROLL
Q.C. SECRETARY

OK 11/12/13



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

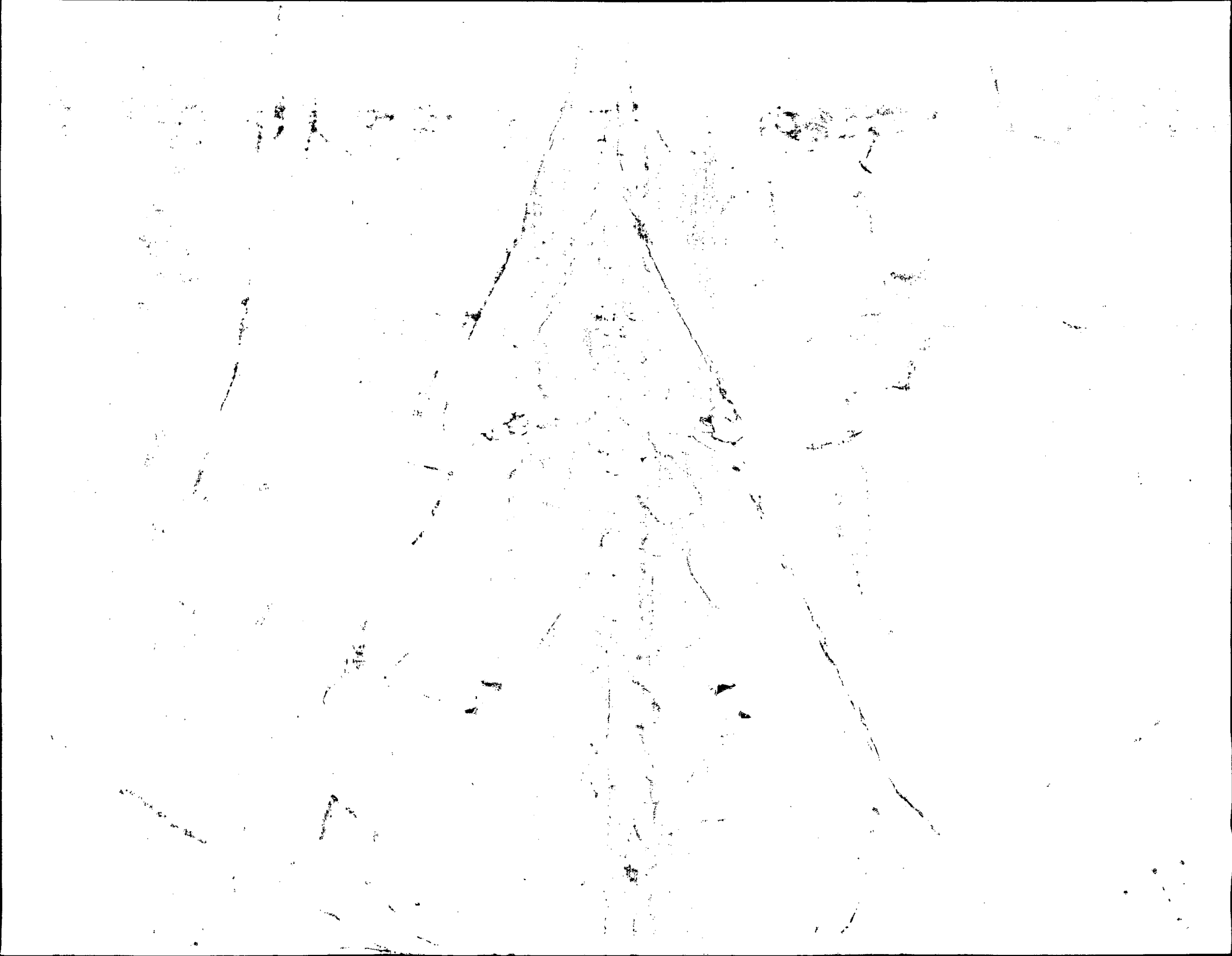
FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO26710

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
6	100	EA	MS27039-5-12		48426	LFC INDUSTRIES	62384		


Jason Lewis
Vice President of Quality

12/04/14





LFC industries

A Division of RKR Technologies, LTD
manufacturer of precision aerospace fasteners

1221 Corporate Dr. W • P.O. Box 5982
Arlington, Texas 76006 (817) 640-1322

SHIPPING REPORT

48426

PRODUCTION ORDER #
COUNTRY OF ORIGIN: USA

M & M AEROSPACE
10000 NW 15TH TERRACE
MIAMI, FL 33172

COMMENTS



DFAR 252.225-7014
ALTERNATE 1 COMPLIANT

RETURN OF ANY MERCHANDISE LISTED HEREON WILL NOT
BE ACCEPTED WITHOUT PRIOR AUTHORIZATION

CERTIFICATE OF CONFORMANCE

THE MATERIALS, PROCESSES AND PARTS FURNISHED WERE PRODUCED IN ACCORDANCE WITH APPLICABLE SPECIFICATION REQUIREMENTS, AND TEST REPORTS INDICATING CONFORMANCE ARE ON FILE SUBJECT TO EXAMINATION. OUR Q.C. INSPECTION SYSTEM CONFORMS TO ISO 9001.

Elmer J. [Signature]
SIGNED

FEDEX NATL'

OHB633

MS27039-5-12
ITEM# 1

2

10000

+0-5%

10-08-2009

10,000

9

.028

286.38

15

8.80

277.58

130

09-11-09

CUSTOMER PACKING SLIP

INDUSTRIAL DIV. OF RKR TECHNOLOGIES
21 CORPORATE DR. W., ARLINGTON, TX 76006
17) 640-1322 FAX (817) 652-1566

LFC IND. CAGE CODE # 62384, CERTIFICATION - FASTENERS IN THIS LOT WERE
MANUFACTURED, PROCESSED AND INSPECTED IN ONE RUN PER APPLICABLE
DRAWING, PROCUREMENT SPECIFICATION, ISO9001:2000, AND AS9100B.

PART #		REVISION		LOT #		CUSTOMER		PO #											
MS27032-5-12		2		48426		M & M		0HB633											
QUANTITY		PROCUREMENT SPECIFICATION		HEAT TREAT SPECIFICATION		DESCRIPTION													
10000		NASM7839		AMS-H-6875A		SCREW, PAN HEAD													
FINISH TYPE		FINISH SPECIFICATION		BAKE		CROSS RECESS													
T1 CL2		AMS-QQ 16B		N/A															
THREAD SIZE		THREAD SPECIFICATION		HARDNESS REQUIRED		HARDNESS ACTUAL AVERAGE													
5/16-24 UNF3A		H28/2		RC 26-32		RC 29													
NDT SAMPLE SIZE		NDT SPECIFICATION		NDT ACCEPT		NDT REJECT		LOCKING ELEMENT SPECIFICATION											
200		ASTM E 1444-05		200		0		N/A											
MAGNETIC PERMEABILITY SAMPLE SIZE		PERMEABILITY ACCEPT		PERMEABILITY REJECT															
N/A		N/A		N/A															
RECESS TORQ SAMPLE SIZE		MINIMUM TORQ REQUIRED		TORQ END LOAD		TORQ ACCEPT		TORQ REJECT											
N/A		N/A		N/A		N/A		N/A											
CHEMICAL COMPOSITION ON CERTIFIED MILL TEST REPORT																			
MILL HEAT #		MATERIAL SPECIFICATION		MATERIAL GRADE		SUPPLIER													
809063		AMS6322N		8740		WIRETECH													
C	P	S	Si	Ni	Cr	Mo	Cu	V											
.42	.011	.012	.26	.43	.49	.20	.16												
B	Al	Co	Pb	Fe	Sn	Zn	N	Mg											
TENSILE SAMPLE SIZE					TENSILE STRENGTH REQUIRED					DOUBLE SHEAR SAMPLE SIZE					D. SHEAR STRENGTH REQUIRED				
20					7250					N/A									
T1	9300	T12	9300	T23		S1		S12		S23									
T2	9800	T13	9500	T24		S2		S13		S24									
T3	9400	T14	9800	T25		S3		S14		S25									
T4	9500	T15	9300	T26		S4		S15		S26									
T5	9800	T16	9800	T27		S5		S16		S27									
T6	9300	T17	9400	T28		S6		S17		S28									
T7	9800	T18	9500	T29		S7		S18		S29									
T8	9400	T19	9800	T30		S8		S19		S30									
T9	9500	T20	9300	T31		S9		S20		S31									
T10	9400	T21		T32		S10		S21		S32									
T11	9800	T22				S11		S22											
FATIGUE SAMPLE SIZE					FATIGUE MAX LOAD					FATIGUE MIN LOAD					METALLURGICAL SAMPLE SIZE				
N/A															20				
F1 CYCLES					F1 LOCATION OF FAILURE					MICRO STRUCTURE					ACCEPT				
F2 CYCLES					F2 LOCATION OF FAILURE					MACRO STRUCTURE					ACCEPT				
F3 CYCLES					F3 LOCATION OF FAILURE					DECARBURIZATION					NONE				
F4 CYCLES					F4 LOCATION OF FAILURE					CARBURIZATION					NONE				
F5 CYCLES					F5 LOCATION OF FAILURE					UNTEMPERED MARTENSITE					NONE				
F6 CYCLES					F6 LOCATION OF FAILURE					GRAIN FLOW					ACCEPT				
F7 CYCLES					F7 LOCATION OF FAILURE					DISCONTINUITIES					ACCEPT				
F8 CYCLES					F8 LOCATION OF FAILURE					DEVIATION/WAIVER NOTES									
FATIGUE ACCEPT					0					FATIGUE REJECT					0				
DATE					SIGNATURE TITLE					AUTHORIZED SIGNATURE					CERTIFICATION AMENDMENT NOTES				
9/11/2009					DATA ENTRY SPECIALIST					<i>Elaine J. Hall</i>					N/A				
															AMENDMENT DATE				



10

11

12

13

14

15

16

17

18

19

WireTech, Inc.6440 E. Canning Street
Los Angeles, CA 90040
Phone (323) 722-4933
Fax (323) 721-2738

SOLD TO

LFC Industries
1221 Corporate Drive West
Arlington, TX 76011
USAWORK ORDER
068753**CERTIFICATION**HEAT NO.
8090637
SALES ORDER / RLS
830298 / 1
ISO 9001-2000 REGISTEREDMECHANICAL TESTING
CERT # 911.01

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	CARRIERS	LADING NO	SHIPMENT DATE		
14274		2,646 Lbs	2	00077593	05/13/2009		
SPECIFICATION L158740-103095B A-8740, AG, SKFG, CHQ WIRE, SEAM & DECARB FREE, SAIP Zinc Phosphate, Lime & Stearate Coating, Size: 0.319 / 0.310 Specifications: AMS 2001H, AMS 6322N, MIL-S-6049A AMEND 1, AMS-S-6049-A							
CERTIFICATION REQUIREMENTS							
Chemical Properties							
C	Si	Mn	S	Cu	Ni	Cr	Mo
.42	.26	.86	.012	.16	.43	.49	.20
Physical Properties							
Grain Size	Jominy 1	Jominy 2	Jominy 3	Inclusions	Macro	Cleanliness	Mill Source
6 J5=55	J8=47	10=41	S2-R1-C2	GOOD	F&S=0	Republic	
Country of Origin USA - DIER Compliant							
Mechanical Properties							
TEST	UNITS	Results					
Tensile Strength	KSI	84.2					
Yield Strength	KSI	71.5					
% Elongation	%	28					
% Reduction of Area	%	72.5					
Rockwell Hardness B Scale	HRB	87					
Decarb (Total)	In	0.00					

**CERTIFICATION
REVIEWED
ACCEPT
LFC
2**

Merchandise covered by this invoice is warranted to be free from defects in workmanship or material but not for any specific length of time, type or measure of service. No claim for allowance will be recognized unless presented in writing within 10 days time after receipt of material. Our maximum liability for any claim predicated upon defective merchandise is limited to replacement of it, or to repayment of it, or to repayment of the purchase price thereof, as warranted. Material cut to specific length or size cannot be returned for credit and request for cancellation of such orders will not be considered if merchandise has been commenced. Buyer, by acceptance of the merchandise covered by this invoice, agrees to the foregoing terms and conditions and those set forth on the reverse hereof. The making of false, fictitious or fraudulent statements or omissions on this document may be punished as a felony under Federal statutes including Federal law, Title 18, Chapter 47.

REPRODUCTION OF THIS CERTIFICATION IS NOT ALLOWED WITHOUT WRITTEN PERMISSION.

Wire Tech, Inc. metallurgical laboratory is accredited in the following tests: chemical analysis per ASTM E 415, mechanical testing per ASTM A 370, Rockwell hardness per ASTM E 18, metallographic preparation per ASTM E 3, decarburization depth per ASTM E 1077, IFI 140, inclusion rating per ASTM E 45, decarburization performed as per IFI 140.

The reported Chemical and Physical Properties are Mill Source results transcribed from mill certificates. HRB(W) are hardness results performed with a 1/16" carbide ball. Unless otherwise specified, HRB and HRC results are conversions from ASTM A370 Tables 1 and 2. *Test result not covered by our current A2LA accreditation. Tests which have been undertaken by a subcontractor laboratory that is not accredited are not endorsed by A2LA or covered by Wire Tech, Inc. A2LA accreditation.

TEST RESULTS RELATE ONLY TO THE ITEMS TESTED.

LATEST REVISIONS OF ASTM

Material is free of mercury, radium, or alpha contamination.

SEP 16 2008 08:13 15867555424

SUPER STEEL TREATING

#1132 P.026 /039



1807 EAST 20TH ST.
PHONE: 330-438-5654

LORAIN, OH 4405
FAX: 330-438-5654

CERTIFICATE OF TESTS

REPUBLIC ENGINEERED PRODUCTS

September 11, 2008
PAGE 1

OF 2

PURCHASE ORD: 006200
PART NUMBER: 0740R1A103-C
ORDER NUMBER: 1369752 - 01
REMARKS: 8090637
SHIP TO ADDRESS

PURCHASE ORDER DATE: 2/11/2008
ACCOUNT NUMBER: 5645-1988-01
SCHEDULE: 6322-85
REVISION: 1

WIRETECH INCORPORATED
6440 E CANNING ST
COMMERCE, CA 90040

WIRETECH INCORPORATED
JANICE DURAN
6440 E CANNING ST
COMMERCE, CA 90040

MATERIAL DESCRIPTION

HOT ROLLED STEEL COILS ALLOY WIRE TIE INC. SPEC COP 3010 REVISION M DTD 03/12/03 EXC PARA 4.1.1.4;
4.1.1.5; 4.1.1.2.3; 4.2 & TENSILE MARK 5049A & AMD 1 COND C-1 EXC MARK & UT WAIVED AMS 6322N
RE AL 18740 FINE GRAIN VACUUM DECARBONIZED AIRCRAFT QUALITY COLD WORKING QUALITY SPHEROIDIZE ANN
RETESTED CHEMISTRY
SIZE: 10.4055 DIAM X COIL
KDS 10.4000MM DIAM X COIL

LADLE CHEMISTRY

C	MN	P	S	SI	CU	NI	CR
0.012	0.86	0.011	0.012	0.26	0.16	0.43	0.19
V	MO	SN	AL	CB	N		
0.007	0.20	0.007	0.024	0.001	0.0074		

CALCULATED TESTS

REDUCED RATIO 1,004.7 TO 1

AUSTENITIC GRAIN SIZE 5 OR FINER BASED ON A TOTAL ALUMINUM CONTENT EQUAL TO OR GREATER THAN .020% PER
ASTM A 255

SEMI - FINISHED RESULTS

JOHNSON HARDNESS TEST SAE J4000/ASTM A255
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32
59 53 56 55 53 51 47 44 41 39 35 35 33 33 31 31 31 30 30 29 29

MACRO ECH TEST ASTM E381/MTI 430
ETCHANT: HCL TEMPERATURE: 170
S R C
AVG 1 1 1

MAGNETIC PARTICLE TEST AMS 2301 AMS2304 AMS2300
IND AVG IND AVG
FREQ FREQ SEV SEV
PCB 03 0 0 0 0

FINISHED SIZE RESULTS

DECARBONIZATION TEST SAE J419/ASTM E1077/JIS G0558
ETCHANT - NITAL MAGNIFICATION - 100X

TOTAL
DEPTH
INCHES
PCB 12411 0.001

DECARBONIZATION TEST SAE J419/ASTM E1077/JIS G0558
ETCHANT - NITAL MAGNIFICATION - 100X
TOTAL
DEPTH
COMPLETE

R. P. SZELIGA
MANAGER TECH. SERVICES

BY JANET K. MARTINE

CERTIFICATION
REVIEWED
ACCEPT
LFC
2



1807 EAST 20TH ST.
PHONE: 330-438-5654

LORAIN, OH 44042
FAX: 330-438-5654

CERTIFICATE OF TESTS

REPUBLIC ENGINEERED PRODUCTS

September 11, 2008

PAGE 1

OF 2

PURCHASE ORD: 006200
PART NUMBER: 0740R1A103-C
ORDER NUMBER: 1369752 - 01
REAR: 8090637
CHARGE ADDRESS

PURCHASE ORDER DATE: 2/11/2008
ACCOUNT NUMBER: 5645-1888-01
SCHEDULE: 6322-85
REVISION: 1

SHIP TO

WIRETECH INCORPORATED
6440 E CANNING ST
LOS ANGELES, CA 90040

WIRETECH INCORPORATED
JANICE DURAN
6440 E CANNING ST
COMMERCE, CA 90040

MATERIAL DESCRIPTION

HOT ROLLED STEEL COILS ALLOY WIRE TECH INC: SPEC COP 3010 REVISION M DTD 03/12/03 EXC PARA 4.1.1.4;
4.1.1.6; 4.1.2.3; 4.2 & TENSILE MIL B 5049A & AMD 1 COND C-1 EXC MARK & JN WAIVED AMS 6322N
FF A191-8740 FINE GRAIN VACUUM DEGAUSED AIRCRAFT QUALITY COLD WORKING QUALITY SPHERODIZE ANN
RESTRICTED CHEMISTRY
SIZE: RDS .4055 DIAM X COIL
RDS 10.1000MM DIAM X COIL

			LADLE CHEMISTRY %					
C	MN	P	S	SI	CU	NI	CR	
0.42	0.86	0.011	0.012	0.26	0.16	0.43	0.49	
V	MO	SN	AL	CB	N			
0.003	0.20	0.007	0.024	0.001	0.00			

CALCULATED TESTS

REDUCTION RATIO 1,004.7 TO 1

AUSTENITIC GRAIN SIZE 5 OR FINER BASED ON A TOTAL ALUMINUM CONTENT EQUAL TO OR GREATER THAN .020% PER
ASTM A29.

SENT - FINISHED RESULTS

JOHNSON HARDNESS TEST SAE J406/ASTM A255
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32
59 58 57 56 55 53 51 47 44 41 39 38 36 35 35 33 33 31 31 31 30 30 29 29

MACRO ETCH TEST ASTM E381/MTL STD 430
ETCHANT: HCL TEMPERATURE: 170
S R C
AVG 1 1 1

MAGNETIC PARTICLE TEST AMS 2301 AMS2304 AMS2300
TND AVG TND AVG
FREQ FREQ SEV SEV
PCE 03 0 0 0 0

FINISHED SIZE RESULTS

DECARBURIZATION TEST SAE J419/ASTM E1077/JIS G0558
ETCHANT - NITAL MAGNIFICATION = 100X
TOTAL
DEPTH
INCHES
PCE 12411 0.001

DECARBURIZATION TEST SAE J419/ASTM E1077/JIS G0558
ETCHANT - NITAL MAGNIFICATION = 100X
TOTAL
COMPLETE DEPTH

R. A. SPALICA
MANAGER TECH. SERVICES

BY JANET K. HARTLINE

R. A. Spalica

CERTIFICATION
REVIEWED
ACCEPT
LFC
2



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172

Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO26710

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
2	800	EA	MS27039-1-04		65011	MAC FASTENERS	0RPT4		


Jason Lewis
Vice President of Quality

12/04/14

Inv # 12/04/14



100 CORPORATE DRIVE, HOLTSVILLE, NY 11742
ISO9001/AS9100 REGISTERED QUALITY SYSTEM'S

QUALITY CONTROL RECEIVING INSPECTION REPORT

PROGRAM KIT COMPONENT OR CHEMICALS OR STANDARD HARDWARE
FOR STAND ALONE SALES ORDERS. PART IDENTIFICATION LABEL FOR
SCANNING.



CERT CNY13031200081



ITEM MS27039-1-04



LOT 65011



PO# PUR03HMH

BRANCH NY

Vendor. MAC FASTENERS

Qty. 95,312

Manf. ... MAC FASTENERS

Rev. 3

Part #..... MS27039-1-04

Lot ID..... 65011

Manufacturer.. MAC FASTENERS

Qty this Lot.. 000095312

Doc Lev..... DFR

Rev..... 3

Sample Size.../000000001

Inspector..... CRP

Cert Date..... 03/12

CUSTOMER CODE: _____



PROCESSED BY: _____

CRP

MACFASTENERS, INC.

1110 Enterprise Street
Ottawa, KS 66067
Phone: 785-242-8812
Fax: 785-242-4616

Packing List**Bill** UFC Aerospace Corp.**To:** PO BOX 2061

HOLTSVILLE, NY 11742-2061

United States

Ship UFC Aerospace Corp.**To:** 100 CORPORATE DRIVE

HOLTSVILLE, NY 11742

United States

Shipment No: 57529**Shipment Date:** 02/19/13**Ship Via:** Yellow Freightways, Inc.**Order Number:** 43892**Order Date:** 12/02/11**Customer Code:** UFC**Phone:** (561) 637-1737**PO Number:** PUR03HWH**Terms:** Net 30 Days

LOT #65011

<u>Item</u>	<u>Quantity</u>					<u>Unit</u>	<u>Description</u>	<u>Revision</u>	<u>Job Number</u>
	<u>Open</u>	<u>Shipped</u>	<u>Back C</u>	<u>Canceled</u>					
6	100,000	110,000			M	MS27039-1-04 Screw machine pan head structural cross recessed	3	65011	



14,688 pcs

SHORT

FEB 28 2013

MON
TUE
WED
THU
FRI
SAT
SUN

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

1

2

3

4

5

6

7

8

9

10

MAC FASTENERS, INC.
1110 EAST ENTERPRISE
OTTAWA, KS 66067

CHEMICAL & PHYSICAL TEST REPORT

CUSTOMER UFC AEROSPACE CORP	PO NUMBER PUR03HWH	MFG QUANTITY 110,000	DATE 02/18/13
PART NUMBER MS27039-1-04	REV 3	LOT NO 65011	PROCUREMENT SPEC NAS498

MATERIAL TYPE 8740				MATERIAL SPECIFICATION MIL-S-6049/AMS6322				MILL HEAT NUMBER 8191599			SUPPLIER JOHNSTOWN		
C .40	Si .25	Mn .86	P .007	S .010	Cu .08	Ni .41	Cr .49	Mo .21	V .005	B	Fe	Al .033	Ti
	Co	N .0047	B	Pb	Mg	Zn		Nb	Sn .005			Other	

MECHANICAL TEST RESULTS - TESTING PER NASM1312

ULTIMATE TENSILE STRENGTH POUNDS
TOO SHORT TO TEST PER NASM1312-8
MIN. REQ.

DOUBLE SHEAR STRENGTH POUNDS / PSI
TOO SHORT TO TEST PER NASM1312-13
MIN. REQ.

HARDNESS	
ROCKWELL "C" SCALE	
REQ.	26 - 32 HRC
SAMPLE SIZE	13
ACTUAL RESULTS 27-28 HRC	



METALLOGICAL EXAMINATION			
Discontinuities	<input checked="" type="checkbox"/>	Carb/Decarb	<input checked="" type="checkbox"/>
Grain Flow	<input checked="" type="checkbox"/>	Microstructure	<input checked="" type="checkbox"/>
Grain Size	<input checked="" type="checkbox"/>	Appearance	<input checked="" type="checkbox"/>
Thread Inspection FED-STD-H28/20 - ASME B1.3		System 21 <input type="checkbox"/>	System 22 <input checked="" type="checkbox"/> System 23 <input type="checkbox"/>

NDT/ ADDITIONAL TESTS	
Magnetic Particle Inspection per ASTM E1444	<input type="checkbox"/>
Liquid Penetrant Inspection per ASTM E1417	<input type="checkbox"/>
Recess Torque Test	<input type="checkbox"/>
Head Marking	<input checked="" type="checkbox"/>

TEST CERTIFICATION

WE CERTIFY THAT THE PART NUMBER, LOT NUMBER, AND SAMPLES REFERENCED ABOVE HAVE BEEN TESTED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATION FOR THE TESTS REPORTED HEREIN. THIS CERTIFICATION SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE APPROVAL OF MAC FASTENERS, INC.

Quality Assurance Representative

AS9100C REGISTERED
SAI GLOBAL - 0058029

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

MAC FASTENERS, INC.
1110 ENTERPRISE
OTTAWA, KANSAS 66067

**CERTIFICATE OF CONFORMANCE
AND
MANUFACTURER'S AFFIDAVIT**

CUSTOMER: UFC AEROSPACE CORP

PO: PUR03HWH

PART NUMBER: MS27039-1-04

REV: 3

LOT NUMBER: 65011

MANUFACTURED QUANTITY: 110,000

MILL HEAT NUMBER: 8191599

COUNTRY OF ORIGIN: UNITED STATES OF AMERICA

DEFAS 252.225.7009 Compliant

MERCURY FREE CERTIFICATION

MacFasteners Inc. certifies that the parts referenced in the above lot number do not contain Mercury or Mercury compounds, and were manufactured in a Mercury free environment.

We certify that the parts furnished against the above referenced purchase order were manufactured by MAC FASTENERS, INC. within the United States, and were processed in accordance with all applicable drawings and specifications.

Objective evidence of compliance is on file, subject to examination upon request.

DATE: 02/18/13


QUALITY ASSURANCE REPRESENTATIVE



1000
1000
1000
1000
1000

1000
1000
1000
1000
1000

1000
1000
1000
1000
1000

MAC FASTENERS, INC.
1110 ENTERPRISE
OTTAWA, KANSAS 66067

HEAT TREAT CERTIFICATION

CUSTOMER: UFC AEROSPACE CORP

DATE: 02/18/13

PO NUMBER: PUR03HWH

MANUFACTURED QUANTITY: 110,000

LOT NUMBER: 65011

MATERIAL: TYPE 8740

PART NUMBER: MS27039-1-04

REVISION: 3

REQUIRED HARDNESS: 26 - 32 HRC

SAMPLE SIZE: 13

HARDNESS: 27-28 HRC

HEAT TREAT SPECIFICATION AS APPLICABLE: MIL-H-6875/AMS-H-6875/AMS2759/AMS5853/PS-1001

The fasteners referenced in this report have been processed, inspected and certified by the Heat Treat Contractor in accordance with all applicable drawings and specifications. Heat Treatment has been verified in accordance with procurement specification and part drawing, by metallurgical and mechanical testing as applicable. Evidence of compliance as well as certification from the Heat Treat Contractor is on file and subject to examination upon request.


QUALITY ASSURANCE REPRESENTATIVE



100

100

100

100

100

100

100

100

100

DE TRAY Plating Works

Specialized Electro-Plating and Polishing

Nickel

Copper

Decorative Chrome

Satin Chrome

Zinc

Cadmium

Passivate

Bright Dip

Strip Copper

Descale

10405 EAST ELEVENTH STREET • INDEPENDENCE, MISSOURI 64052
Phone (816) 252-8411 Fax (816) 252-8527 • E-mail: DeTrayPlating@Aol.com

February 14, 2013

Mac Fasteners
1110 East Enterprise Street
Ottawa, Kansas 66067

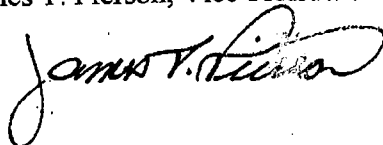
Subject: Certification

This is to certify that the following parts have been electrodeposited cadmium plate per Spec.-
QQ-P-416/AMS-QQ-P-416/NAS4160/AMS2400, Type II, Class 2. Please reference our
Invoice#167488 dated 02/14/2013 for:

Lot#- 65011

P.N.-MS27039-1-04

James T. Pierson, Vice-President



DE TRAY PLATING WORKS





Johnstown Wire Technologies

124 Laurel Ave,
Johnstown, PA 15906

Phone: 814-532-5680
Fax: 814-532-5684

TEST REPORT

WORK ORDER
454564

LOT NUMBER
K-8191599

SALES ORDER / RLS
009590 / 1

SOLD TO

Mac Fasteners, Inc.
C/O TD Logistics Inc.
14505 W 100th Street
Lenexa, KS 66215
USA



Total lbs 18568

CUSTOMER P.O. 50516	CUSTOMER PART 8740-.167	QUANTITY 9,984 LBS 8589 lbs	COILS 6	LADING NO 00114187	SHIPMENT DATE 11/28/2012
SPECIFICATION MacFast-87167 AMS2201; AMS6322; AMS-S-6049A MIL-S-6049A 8740 DFARS TS 95000 PSI Max Defense Federal Acquisition Regulation Supplement Silicon Killed Fine Grain Aircraft Quality/Cold Heading Quality Drawn From Annealed Rod Spheroidize Annealed In Process Heavy Phos & Light Lube Ctd Size: .167 +.0005 -.0005					
CERTIFICATION REQUIREMENTS					
Chemical					
C .40	Mn .86	P .007	S .010	Si .25	Al .033
Ni .41	Cr .49	Mo .21	Cu .08	V .005	
Co .003	Ti ???????	N .0047	Sn .05		
Physical					
AM 301 0000	J1 58	J10 39	J11 37	J12 36	J2 57
					J3 56
					J5 54
					J4 55
					J6 52
					J7 49
					J8 46
					J9 42
MacroClean E-381 11X					
Mechanical					
TEST SPEC	UNEN	HIGH	LOW	AVERAGE	
Tensile Str	Lbs/in	90000	85000	88000	
RA Per Cent	Percent	75.2	70.9	72.5	
Decarb. FFD	Inches	.000	.000	.000	
Surface def. depth	Inches	.000	.000	.000	
Rod / Melt Source					
Rod Source Republic	Melt Source Republic	Country of Origin USA	Nafta Yes		
End of Certification					

I certify that the results are a true and correct copy of the records prepared and maintained by JOHNSTOWN WIRE TECHNOLOGIES in compliance with the requirements of the cited specification. Chemistry as reported by the rod / bar supplier is not in JWT A2LA accreditation. This test report cannot be reproduced or distributed except in full without the written permission of JOHNSTOWN WIRE TECHNOLOGIES. The test results certified herein relate only to the items tested.

D. L. Deetscreek
D. L. Deetscreek
Director of Quality Assurance





1807 EAST 28TH ST.
PHONE: 330-438-5580

LORAIN, OH 44055
FAX: 330-438-5695

CERTIFICATE OF TESTS

REPUBLIC STEEL

8/17/2012 2:08:00 PM

PAGE 1 OF 2

PURCHASE ORD: 82817
PART NUMBER: FKT40AA-.3125
ORDER NUMBER: 1526555 - 01
HEAD: 8191599
CHARGE ADDRESS

PURCHASE ORDER DATE: 7/6/2012
ACCOUNT NUMBER: 5672-1921-01
SCHEDULE: 3454-92
REVISION: 1

SHIP TO

JOHNSTOWN WIRE TECHNOLOGIES
124 LAUREL AVE
JOHNSTOWN, PA 15906

JOHNSTOWN WIRE TECHNOLOGIES
EDWARD ZAPOLA
C/O C & BL RAILROAD
TRACK 629
JOHNSTOWN, PA 15901

MATERIAL DESCRIPTION

HOT ROLLED STEEL COILS ALLOY AMS 2301K JOHNSTOWN WIRE SPEC RW-100 REVISION DTD 04/21/04 EXC PARA 10.3 AMS 6322N EXC HARD JOHNSTOWN WIRE SPEC RW-005 REVISION DTD 12/31/00 EXC SURFACE DEFECTS JOHNSTOWN WIRE SPEC PART NO. FKT40AA REVISION DTD 12/31/00 MIL S 6049A & AMS 1 COND B-1 EXC MARK & UT PAIRED EF-AISI-8740-H FINE GRAIN VACUUM DEGASSED AIRCRAFT QUALITY FIXED PRACTICE QUALITY RESTRICTED CHEMISTRY RESTRICTED MAX INCIDENTAL ELEMENTS
SIZE: RDS .3125 DIAM X COIL
RDS 7.9375MM DIAM X COIL

LADLE CHEMISTRY

C	MN	P	S	SI	CU	NI	CR
0.4	0.86	0.007	0.010	0.25	0.08	0.41	0.49
V	MO	SN	AL	B	CB	N	
0.005	0.21	0.005	0.033	0.0001	0.003	0.0047	

CALCULATED TESTS

REDUCTON RATIO 1,590.4 TO 1

AUSTENITIC GRAIN SIZE 5 OR FINEER BASED ON A TOTAL ALUMINUM CONTENT EQUAL TO OR GREATER THAN .020% PER ASTM A9.

SEMI - FINISHED RESULTS

JOHNS WIRENESS TEST

SAE J400/ASTM A255

1 2 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32
58 51 56 55 54 52 49 46 42 39 37 35 33 32 32 31 30 29 29 28 28 28 27

MACRO ETCH TEST

ASTM E381/MIL STD 430

ETCHANT: HCL TEMPERATURE: 100

	S	R	C
AVG	1	1	1

MAGNETIC PARTICLE TEST

AMS 2301K AMS2304 AMS2300

	IND	AVG	IND	AVG
FREQ	FREQ	SEV	SEV	
PCE 03	0	0	0	0

FINISHED SIZE RESULTS

DECAERIZATION TEST

SAE J400/ASTM E1077/JIS G0558

ETCHANT: NITAL MAGNIFICATION: 100X

	SPIKE	COMPLETE	TOTAL
	INCHES	INCHES	DEPTH
PCE 1200	0.002	0	0.002

CAPABLE OF SEAM DEPTH 1% MAX DIAMETER NOT LESS THAN .005 MAX

G. BOUTH
DIRECTOR QUALITY ASSURANCE

BY DEBORAH STOKES



MT Kuth

4

1000

1000

1000

1000

1000

4

1000

1000

1000

1000

1000

1807 EAST 28TH ST.
PHONE: 330-438-8280LOMA, OH 44055
FAX: 330-438-8695

CERTIFICATE OF TESTS

REPUBLIC STEEL

8/17/2012 2:08:00 PM

PAGE 2 OF 2

PURCHASE ORD: 82817
PART NUMBER: PXT40AA-.3125
ORDER NUMBER: 1526555 - 01
HEAT: 8191599PURCHASE ORDER DATE: 7/6/2012
ACCOUNT NUMBER: 5672-1921-01
SCHEDULE: 3454-92
REVISION: 1

NOTES

CHEMICAL ANALYSIS CONFORMS TO APPLICABLE SPECS: ASTM E415, LBL10129, LBL10130, ASTM E1019, LBL10158, LBL10114, AND ASTM E1005, LBL10184, LBL10188.

REPUBLIC STEEL HEREBY CERTIFIES THAT THE MATERIAL LISTED HEREIN HAS BEEN INSPECTED AND TESTED IN

NOTES (CONTINUED)

ACCORDANCE WITH THE METHODS PRESCRIBED IN THE GOVERNING SPECIFICATIONS AND BASED UPON THE RESULTS OF SUCH INSPECTION AND TESTING HAS BEEN APPROVED FOR CONFORMANCE TO THE SPECIFICATIONS.

CERTIFICATE OF TESTS SHALL NOT BE REPRODUCED EXCEPT IN FULL.

ALL TESTING HAS BEEN PERFORMED USING THE CURRENT REVISION OF THE TESTING SPECIFICATIONS.

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FED STATUTES TITLE 18 CHAPTER 47.

THE MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURE DURING PROCESSING OR WHILE IN POSSESSION.

NO WELD OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL.

THE RESULTS REPORTED RELATE ONLY TO THE ITEMS TESTED.

SOURCE INFORMATION

MELT SOURCE: CANTON CAST ROLL MELT COUNTRY: U.S.A HOT ROLL SOURCE: LORAIN 9/10, U.S.A
MELT METHOD: EF BLOOM RED. NO: 1690.4

END OF DATA

CC

END OF DATA

WITH SHIPMENT 1 COPY PRINTED AT SHIPPING AREA
FAX SHIP TO 1 COPY ATTENTION EDWARD ZAPOLA 1-814-532-5684
FILE 101 1 COPYG. SMITH
DIRECTOR QUALITY ASSURANCE

DEBORAH STOKES

*MT Kuth*